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DETROIT

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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JUNE NEW CAR SALES PUT AT 253,890

Austin Attracts 2,500,000 Visitors; Orders Piling Up At Rate of 500 Cars a Day

Thousands of Retail Orders Are Taken on First Day, C. A. Best Discloses; Orders 60 Days Ahead of Output

DETROIT, July 24.—More than 2,500,000 persons attended the public christening of the bantam Austin car introduced for the first time to the American motoring public in a huge "coming out party" given by Austin distributors early this month, according to official announcement made here today by the American Austin Car Company.

So great were the throngs at distributors' showrooms that it was impossible during the first few days to give individual attention to prospective buyers. Throughout the country, as the bantam cars were being driven out of showrooms, each became the center of an eager throng who often surrounded it and stopped its progress.

With only partial returns available from Austin distributors, retail orders for the new bantam car, the figures show, are accumulating at a rate of 500 cars per day. In fact, the Austin plant at Butler, Pa., has more orders for cars for immediate shipment than it can hope to build during the next sixty days.

"The bantam car clicked from the word 'go,' according to reports pouring in on me from our various distributing centers," declared C. A. Best, general sales manager of the American Austin Car Company here. There is no longer any question as to whether this unique type of personal transportation will take with the American public as it has taken in England, France, Germany, and in other countries. The answer was indicated by more than 2,500,000 persons who jammed the showrooms of Austin distributors during the coming-out party given for the bantam car. Eight years of world service in city traffic, mountain roads,

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G. M. OF CANADA SEEN GAINER UNDER TARIFF

Montreal, Que., July 24.—In discussing the increase in the Spanish tariff against American made automobiles, H. A. Brown, vice-president and general manager of General Motors of Canada, Ltd., said that he expected the change to bring benefits to the company's plant at Oshawa.

"During the past year," he continued, "General Motors export trade to Spain has all been supplied by the factory at Oshawa, and since the new tariff has become effective, cars manufactured in Canada will receive preference over those made in the United States. This will mean an increase in export trade for my company and the plant in Oshawa in particular."

FORD VACATION PERIOD EXTENDED UNTIL AUG. 4

Detroit, July 24.—The Ford Motor Company has extended its two-week vacation shutdown another week and will reopen August 4. Plants closed July 12 for vacations and were originally planned to reopen July 28.

COURT RULES DEALERS ARE SUBJECT TO FRAUD ACTION ON CONTRACTS

Washington, July 24.—A decision of vital importance to dealers in used cars throughout the country has just been handed down by the Massachusetts State Supreme Court.

The purchaser of a used or second-hand car entering into a contract embodying terms and conditions of the sale and stipulating that the vehicle is to be purchased "as is," may, nevertheless, recover damages in an action for deceit, according to the decision.

The court pointed out that the plaintiff brought suit, not on the contract or for breach thereof, but in tort for fraud, holding that the provisions of the contract did not defeat a recovery of the damages sustained by reason of such fraud.

Representations had been made to the purchaser that the car was a new one, having been driven only a few hundred miles, whereas the facts showed that it was a reconditioned car.

The usual practice in the sale of used cars, it was pointed out, is to take a contract from the purchaser stipulating that the car is sold "as is, where is, and as shown," and that the seller will not be bound by any representations of any agent not incorporated in the contract.

"Notwithstanding this language," the Massachusetts court declared, "the purchaser may recover damages in an action for deceit, where the agent of the seller made misrepresentations as to the condition of the car, thus inducing the execution of such a contract."

BUSINESS SENTIMENT SHOWS IMPROVEMENT

Cleveland, July 24.—Business sentiment is changing for the better, and as the year advances prospects are for increasing industrial activities, according to the Union Trust Company, Cleveland. In many lines, the bank says, feeling is spreading that the low level of recession has passed and that an upturn is near at hand.

"The basis for this conviction ap-

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REGISTRATIONS IN FIRST 21 STATES TOTAL 71,491

Decline Last Month From Year Ago Indicated As 34%, While Seasonal Drop From May Was 26%

NEW YORK, July 24.—On the basis of complete returns from twenty-one states and the District of Columbia, it is estimated that new car registrations in the United States in June approximated 253,890, as compared with 386,537 in the corresponding month of last year, a decline of 34 per cent., and with 345,041 in May, a seasonal falling off of 26 per cent.

The total new cars registered in the twenty-one states and District of Columbia in June was 71,491, as compared with 110,870 in June, 1929, and 99,692 in May, 1930, for the same states. This was a falling off of 35 per cent. from a year ago and 28 per cent. from the preceding month.

In June, 1929, the returns from these states accounted for 28 per cent. of the total registrations for the month. If this holds good in June of this year, with the 71,491 being 28 per cent. of the total, the total for the full month will approach the 253,890 stated above. There is likely to be a little variation from that figure, but not a great deal.

If the June total approximated that figure, the total registrations in the first six months of 1930 amounted to approximately 1,646,558, as compared with 2,156,114 in the corresponding period of last year, a decline of 509,556 units, or 23.6 per cent. This compares with a decline of 21 per cent. in the first five months of the year.

The decline from last year was heavy in all states reporting for June thus far, but several states made good showings in comparison with the preceding month. Florida's June sales were 2,554, as against 2,586 in the preceding month, while North Carolina and the District of Columbia showed small drops. Sales in South Dakota and Utah in June

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ADVANCE ORDERS FOR BUICK $10,000,000

New York, July 24.—Advance orders for the new Buick eights to be announced, with complete details, in the Automotive Daily News of Saturday, July 26, total more than $10,000,000, according to announcement of C. W. Chuchill, general sales manager.

"Our advance sale to consumers this year is one of the greatest ever recorded by our organization. More than 7,000 persons have placed orders without seeing the 1931 model."

NASH DELIVERIES GAIN IN FIRST WEEK OF JULY

Kenosha, Wis., July 24.—Deliveries of new Nash automobiles during the first week in July in the ten American cities which registered the highest comparative Nash sales for the period were 32 per cent. above those made during the previous week, it was announced today by C. H. Bliss, sales manager of the Nash Motors Company.

He added that sales of Nash cars in these "high ten" cities through that holiday week were the second highest since the week ended August 17, 1929, and that the totals may be considered an encouraging showing.

G. M. Cash and Securities Holdings Gain $48,000,000

NEW YORK, July 24.—Exceeding dividend requirements by a large margin, General Motors Corporation in the first six months of the current year showed net earnings of $98,355,355, equal to $2.15 a share on the common stock after all preferred dividend payments, according to announcement today by Alfred P. Sloan, Jr., president.

The corporation's dividend requirement on the common stock for the first six months was $1.50, leaving an excess of 65 cents to be applied to the second half. As a matter of fact, there was an excess of 82 cents a share, due to a non-operating profit of $9,517,943, or 17 cents a share, from the sale of 1,375,000 shares of the corporation's common stock to the General Motors Management Corporation at $40 a share. This stock had been accumulated in the open market in the past three years at around $35 a share.

Including this additional and non-recurring profit, the net income for the first six months was $105,932,428, or $2.32 a share, leaving only 68 cents to be made in the second half of the year to assure the earning of the full dividend for the year.

Cash, government and other marketable securities held by the corporation as of June 30 amounted to $175,693,782, as compared with $127,351,530 as of December 31, 1929, an increase of $48,342,252. The net working capital on that date amounted to $290,577,234, as against $251,287,782 at the close of 1929.

In commenting on the corporation's record in the first half year, Mr. Sloan said, in part:

"From the above statement of the corporation's cash and working capital position, it will be recognized

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Western Automobile Rates Cut; Raised in East by I. C. C.

NEW YORK, July 24.—Considerably lower rates on automobile shipments to points in Western Trunk Line territory beyond the Mississippi River and as far West as the Rocky Mountains are indicated, while rates to points east of the Mississippi River and north of the Ohio River are advanced about 10 per cent. in two sweeping decisions that have just been released by the Interstate Commerce Commission, as reported to the National Automobile Chamber of Commerce.

For several years the commission has been taking testimony with a view of revising the class rates in these two territories, and the rates ordered in the decisions take the place of all rates heretofore applying on freight not covered by special commodity tariffs. Shipments of automobiles and nearly all automobile parts are controlled by these class rates. The decisions change the rates between all points, and it will take some months for the railroads to revise their tariffs and get the new rates into effect.

"While our complete analysis of these voluminous decisions will take some time," said J. S. Marvin, general traffic manager, National Automobile Chamber of Commerce, "it is apparent that the Eastern decision has followed expectations in advancing the higher classes that control rates on automobiles and on some of the automobile parts. The carload rate on automobiles, for example, from Detroit to New York, is advanced from $1.22 to $1.35½ or about 10 per cent. This amounts to $4.05 on a 3,000-pound automo-

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Western Automobile Rates Cut; Raised in East by I. C. C.

(Continued from Page 1)

bile. Philadelphia, Baltimore and Boston are advanced in the same proportion.

"Somewhat higher rates will also be found, no doubt, on automobile parts rated, second, third and fourth classes, such as automobile bodies and parts made of brass, aluminum and copper, but the bulk of the heavier parts which take fifth class rates will not be as vitally affected.

"Shipments of automobiles from the factory territory to points west of the Mississippi River as far as the Rocky Mountains are materially lower, reductions extending from 25 cents to $1 per 100 pounds, and amounting to $6 up to $30 on a 3,000-pound automobile. This is because the commission has established through class rates from the Ohio-Michigan-Indiana territory to Western Trunk Line territory governed by first class for automobile shipments, whereas heretofore 110 per cent. of first class has been charged up to the Mississippi River, plus the local rates beyond. The arrangement is similar to the through-class rates established about two years ago from the same territory to points south of the Ohio River. It follows a tendency to establish such through rates throughout the country in important districts where combinations of locals have heretofore been used.

"The extra high 110 per cent. rating will hereafter apply only on automobiles shipped to points east of the Mississippi and north of the Ohio river, and in this territory a special committee of railroads has for some time been making a joint study with the traffic department of the N. A. C. C., which has furnished voluminous data regarding the shipments, including the fact that the railroads are now carrying only about one-third of the cars and trucks sold in this territory, the balance being handled over the highways and on boats."

JUNE NEW CAR SALES PLACED AT 253,890

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actually exceeded those of the preceding month.

Following are the June registrations in the states thus far heard from, as compared with the corresponding month of last year and with the preceding month:

	June 1930	June 1929	May 1930
Alabama	2,055	3,391	2,578
Arkansas	882	1,837	1,883
Connecticut..	4,702	6,315	5,813
Delaware.....	798	1,045	911
Florida	2,554	3,680	2,586
Idaho	894	2,157	1,431
Illinois	16,339	23,208	23,046
Maryland ...	3,747	4,912	4,361
Minnesota....	6,379	9,538	11,064
Missouri.....	6,772	10,039	8,756
Montana.....	1,005	2,719	1,519
Nevada	183	304	225
N. Hampshire	1,345	1,807	1,938
No. Carolina.	3,189	5,139	3,315
No. Dakota..	1,954	2,967	1,998
Rhode Island	1,648	2,668	2,183
So. Carolina.	1,420	2,497	1,917
South Dakota	2,106	4,190	1,862
Utah	1,357	1,787	1,300
West Virginia	3,162	4,542	4,239
Wisconsin ...	6,764	13,699	14,493
Dist.Columbia	2,236	2,429	2,274
Totals	71,491	110,870	99,692

GLENN H. CURTISS, NOTED AVIATION PIONEER, DIES

Buffalo, N. Y., July 24.—Death came suddenly to Glenn H. Curtiss, aviation pioneer, in the General Hospital here yesterday. On July 11 Mr. Curtiss was operated on for appendicitis. His condition since then had been reported daily by surgeons as excellent. Early yesterday he lapsed into a coma and before relatives could reach his bedside he died. Hospital officials gave the cause of death as pulmonary embolus, a blood clot on an artery near the heart.

NORTHERN CALIFORNIA'S NEW CAR SALES GAIN LED BY SACRAMENTO COUNTY

San Francisco, Cal., July 24 (UTPS)—For the forty-seven northern California counties, Sacramento county "ran away with the show" for the month of June in that it showed an increase of 24 per cent in sales of new cars as compared with June, 1929, the figures being 682 cars in June, 1930, as compared with 551 in June, 1929. The state as a whole, however, showed a decrease of 20 per cent. in sales as compared with June of last year, the figures being 19,364 for June, 1930, as against 24,095 in June, 1929. These figures, released by the Motor Registration News, are taken by motordom to be quite accurate.

For the forty-seven northern California counties, Ford sales totaled for the month of June, 1930, better than 41 per cent. of all new car sales. Chevrolet sales approximated 18 per cent. of all new car sales for the same territory.

Taking the chief cities of the northern California division, in San Francisco, of the 1,638 new cars sold during June, 1930, 663 were Fords and 164 Chevrolets; in Oakland, of a total of 727 cars, 317 were Fords and 117 Chevrolets; in the city of Sacramento, of 464 cars, 161 were Fords and 96 Chevrolets.

The summer slump has made itself felt, however, as the new car sales fell off at the rate of some 600 per week for the entire state when the last week of June is compared with the first week in July.

MASSACHUSETTS GASOLINE CONSUMPTION GAINS 10%

Boston, Mass., July 24.—Gasoline tax returns in Massachusetts for the first six months, to June 1, show a total of 239,191,857 gallons used, compared with 217,604 in the same period last year, a gain of almost 10 per cent. Allowance should be made for an increase of about 3.2 per cent. in the number of motor vehicles registered. Total income from the gas tax for the first six months was $4,783,835, an increase of $431,739 over last year.

2,500,000 ATTRACTED BY BANTAM AUSTIN; 500 ORDERS DAILY

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deserts and polar exploration made the record of the little car beyond question, and the new body designs introduced by the American Austin Car Company proved a revelation in style and beauty.

"Thousands of the visitors insisted upon placing their orders for one or more bantam Austins immediately. Despite the fact that without a single exception the showrooms were so crowded that salesmen could give little individual attention to 'prospects,' thousands of retail orders were taken the first day of the public showing. At present retail orders are piling up at the rate of more than 500 daily, and crowds are still flocking to see the cars. The Butler, Pa., factory of the American Austin Car Company has orders for more cars for immediate shipment than it can hope to build for the next sixty days.

"The old adage, 'there's always room for one more,' amply proved itself in the automobile field with the bantam Austin. There is demand, and a great demand, for the Austin bantam car in the United States because it introduced not only a smart transportation unit but because the little car offers remarkably economical transportation service. The bantam Austin is bound to make an enormous contribution to the relief of the current traffic and parking problems which now beset every American community."

BUSINESS SENTIMENT SHOWS IMPROVEMENT

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parently lies in the realization that on the whole in recent months consumption has exceeded production," says the bank in its magazine, Trade Winds. "The feeling is growing that surplus stocks have now been thoroughly worked off, that merchandise purchased by the public last fall must be to a large extent in need of replacement and that before long a general demand for merchandise will make itself felt to a larger extent.

"That the American public will have the capacity to buy as the season progresses is indicated by the fact that savings deposits in banks throughout the United States have on the whole shown a definite increase. Although there is still a great deal of unemployment among industrial work, this is being offset to a larger extent by construction work, road-building projects and other seasonal activities, which are adding to pay roll totals."

SPARKS *from* DETROIT

Wayne County Registrations

* * *

Sunday Closing Successful

* * *

A Race Around the States

A COMPILATION just made by the Detroit Motor News, published by the Detroit Automobile Club, shows that Wayne county, Mich., people thoroughly believe in patronizing the product for which Detroit is most noted.

This compilation shows that only sixteen states of the Union have a larger motor car registration than Wayne county. In this one county alone there are 515,870 automobiles registered, which makes one inclined to believe statements from motorists of other states that driving on the streets of Detroit is somewhat different from driving in other large cities. We have also heard it claimed that lack of crosstown thoroughfares in the Motor City is stifling Detroit, despite the fact that our super-highways are second to none in the world.

* * *

OFFICIALS of the Detroit Automobile Dealers' Association expressed themselves today as being well pleased with the Sunday closing rule, which went into effect a couple of weeks ago. They report there has been no loss in retail sales volume since Sunday closing became effective.

Before it was adopted, a campaign to inform the public of the plan was carried out on the radio and through newspapers. Although the plan has been tried before in this city, it has never been so successful as at the present time.

* * *

For several weeks Ray Cooper, manager of the aviation division of the Detroit Board of Commerce, has been getting ready for the 6,000-mile airplane race around the United States. Monday morning twenty planes started from Detroit on the first leg of the trip. The winner will be rewarded with a prize of $40,000.

* * *

THE United States Rubber Company has been busy for the past year concentrating its manufacturing facilities. F. B. Davis, Jr., chairman of the board, has just announced that the company is well along consolidating its divisions manufacturing mechanical goods at its new plant in Passaic, N. J.

Of course, the United States organization has concentrated the manufacture of tires in its plant in Detroit. That factory has been doing exceptionally well and the word at the plant is that business is good.

* * *

DURING the extremely hot spell recently, very few prostrations were reported in Detroit plants. The manufacturing plants, and especially the automobile plants, are so constructed that the ventilation is of the very highest type.

* * *

NOW that Chrysler has announced its new eights and these automobiles have been inspected by record crowds throughout the United States, the automobile-buying public is eagerly awaiting the opportunity to inspect the Buick eights, which will be announced in a very few days.

New models this year appear to be attracting more attention than usual, and the showrooms are always crowded with the curious.

* * *

WHEN the Austin was announced recently, it was estimated by Austin officials that approximately a million and a half people would inspect the cars in the first week or two. This figure held good until the middle of last week when compilations were completed, which showed that a total of three million persons had already inspected the Bantam automobiles in showrooms throughout the United States.

Cities Service Adds to Its Fleet

THE CITIES SERVICE OIL COMPANY of Cleveland, O., has recently added to its Autocar fleet this *Dispatch model.* It is powered with a six-cylinder engine, rated at two tons capacity, equipped with 7-50-20 balloon tires, the Autocar de luxe coupe-type cab and a 1,200-gallon five-compartment semi-trailer

NEW ENLARGED QUARTERS OPENED IN MILWAUKEE BY UNITED MOTORS SERVICE

Milwaukee, Wis., July 24.—United Motors Service, Inc., has formally opened its new and enlarged quarters at 532-40 Van Buren St., comprising 30,000 square feet of floor space.

The local branch is one of the twenty-seven operated in the United States and Canada, rendering parts and specialized repair service on automotive equipment and marks the second expansion of the local branch. J. L. Winters is manager of the branch here.

Visitors to the company's new quarters on July 23 were given keys to a treasure chest containing $300 in gifts of automotive equipment. Holders of five lucky keys were entitled to a share of the $300 prize.

$50,000 CAROLINA BRANCH FOR G. M. C. TRUCK UNIT

Charlotte, N. C., July 24.—Plans for investing $50,000 in construction of a modern building for the General Motors Truck Company branch in Charlotte were announced today by S. L. Whitmore, manager of the branch. The building will be erected in West Morehead Street, just east of the Southern Railway underpass.

Of steel and brick construction, the building will be 105 feet in width by 200 feet in depth with a private street running its full length. The structure will be one story in height. Contract has been let to the Little Construction Company. The building will be ready for occupancy by November 1, Mr. Whitmore said.

BIRMINGHAM CHEVROLET DEALER GETS RESULTS ADVERTISING BY MOVIE

Birmingham, Ala., July 24 (UTPS).—Screen advertising was used to announce to the public the opening of the beautiful new home of the Wood Chevrolet Company here recently.

Very satisfactory results were obtained from the advertising film, according to H. F. Wood, president of the company, one of the most progressive Chevrolet dealers in the Birmingham territory.

The film showed the new home of the company. It pointed out to the theater patrons the beauty of the company's premises and the progressiveness of the firm. The screen advertising idea was used in three downtown theaters and five neighborhood theaters, according to Mr. Wood.

Used Car Sales Gain 10% in Ad Campaign

OMAHA, Neb., July 24.—Stewart Motor Company, 20th and Harney Streets, "Omaha's downtown Ford dealer," has effected a 10 per cent. increase in used car sales since July 1, over the corresponding period last month, and officials in charge of the sales department attribute the lion's share of this increase to carefully prepared advertising in the Omaha newspapers.

A typical ad has a headline which attracts the reader's eye. It is made up of two words in large type, "HARD LUCK!" The subhead continues, "Overtook the Original Purchaser of This 1930 Hupp '6' Sedan." The remainder of the ad is featured by a personal touch which fairly compels the reader to continue. It reads: "Less than ninety days old, it is naturally like new. Fully equipped with wire wheels, trunk rack, etc.; cost $1,285 new, easily worth $1,505 as it is, but offered for just the amount of the unpaid balance. Available on liberal terms and light trade-in considered. May we suggest that you investigate this today—you will be favorably impressed!"

"FRANKLY—We wish to assure any one contemplating the purchase of an automobile during the next six months that a visit to our used car department immediately will undoubtedly prove most enlightening. Why?

"ANSWER No. 1.—1929 Studebaker Dictator two-passenger coupe, exceptionally clean throughout and easily worth $750. To the first buyer at . . . $550."

The answers continue up to No. 33, or whatever number of first class used cars the company has on hand.

AMARILLO FIRM OPENS FORD SERVICE DIVISION

Amarillo, Tex., July 24.—The McClure Motor Company of this city has installed a service department for Fords. The firm has a full personnel of factory-trained mechanics, giving instant service. It will carry a full line of Ford parts. The company also washes and greases Fords, giving complete service in all lines.

UNIQUE NASHVILLE TEST FOR CHEVROLET DRIVERS

Nashville, Tenn., July 24.—The Chevrolet dealership has taken the former Buick home and with fresh paint and cleaning up has made a most attractive corner. The firm is running an unusual contest to determine how far can one get on a pint of gasoline. It is open to any driver using a Chevrolet car. The prize for the most mileage is $50 and there are lesser prizes.

MILLER-KNUTH COMPANY OF OMAHA INCORPORATED

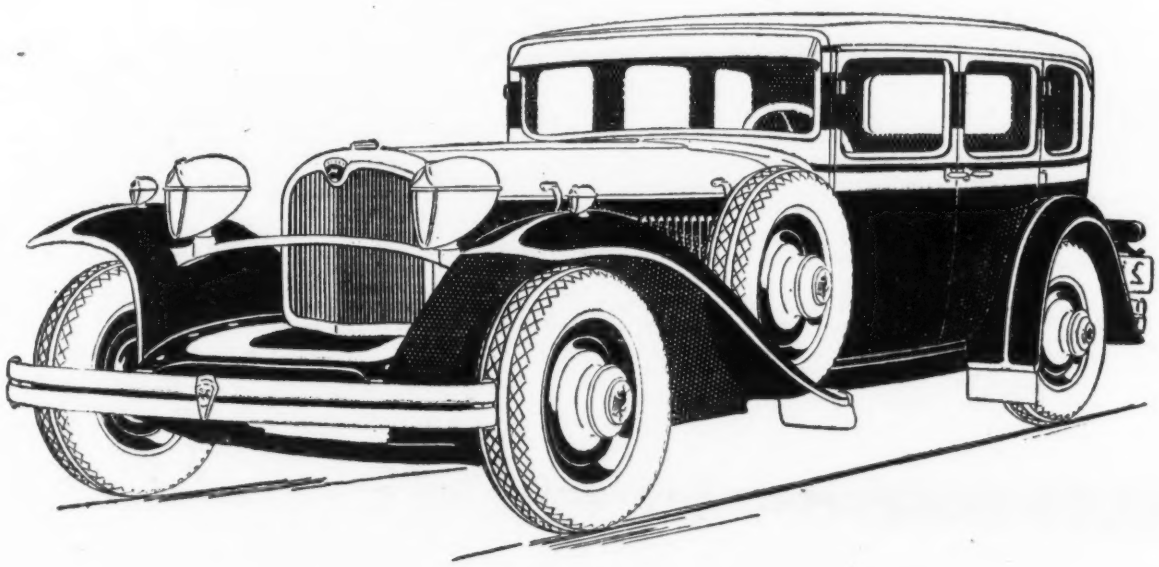
Lincoln, Neb., July 24.—Miller-Knuth Chevrolet Company of Omaha, which has branch stores at Sioux City, Ia., and in several Nebraska cities, has filed articles of incorporation with the Nebraska secretary of state. The corporation has an authorized capital stock of $50,000. Directors are B. F. Knuth, Ryal Miller and Clarence B. Miller.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Presenting

RUXTON

America's First Front Wheel Drive Motor Car



Everywhere enthusiastic admiration greets the premier showing of the automobile of the decade—the Ruxton. No other car gives you so much in style, custom lines, dress and individuality. Endorsed by engineers as the outstanding new-idea car . . . . the Ruxton *pulls* smoothly from the front, instead of *pushing* with spasmodic jerks from the rear.

In short, Ruxton has put the horse where it belongs, in front of the cart, and here are the results: A car smartly low; a body surprisingly quiet; safety at high speeds; restful riding comfort; unfailing traction; quick pickup; gasoline and tire economy and a car that is the target of admiring eyes wherever it rolls.

We invite *you*, who seek the better and more progressive things of life, to ride and drive the Ruxton . . . . to thrill as you have never thrilled before . . . . to sense a new driving sensation as smooth as floating on air.

• • • •

RUXTON is now being formally presented in this city by
THE NEWLY APPOINTED RUXTON DISTRIBUTORS

Will Your name be on this ad when the New Idea Car is shown in Your town?

The Name and Address of
A Live Wire Distributor in Your Town
will appear in this space.

Get the Big Profit Story today!

THE RUXTON CORPORATION
ST. LOUIS, MO.

AFFILIATED WITH MOON MOTOR CAR COMPANY, KISSEL MOTOR CAR COMPANY

Use this Coupon mail it today →

SALES MANAGER, The Ruxton Corporation, St. Louis, Mo.
Send me, without obligation, the whole story on the Big New Idea in Motor Cars!

Name.....
Address.....
City.....State.....
Make now handling.....

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
350 Hudson St., New York, N. Y.
O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary.

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Circulation—Net paid Average over 10,000 daily guaranteed.
Member A. B. C.

FRIDAY, JULY 25, 1930

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George M. Slocum, Manager Detroit Bureau, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500: Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill. phone Central 5936; Metz B. Hayes, New England Manager, Little Building, Boston, Mass.; Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash. Address ALL advertising and business correspondence to 2716 Graybar Building, New York City.

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Intensive Selling

WE have heard quite a lot this year in the automotive business about intensive cultivation of markets. Dealers who realized early that sales would come hard this year and set about dragging every possible sale out of their territories were the ones who came through the year without disaster. They combed their prospect lists and probably got closer to their logical customers than ever before in history.

When it comes to talk of intensive cultivation of prospects, however, there is a business which has developed this feature of selling to a place that is not even dreamed of in the automotive field. We refer to the implement industry which supplies farmers with the machinery that makes modern agriculture what it is.

The modern farm implement dealer not only knows but is the intimate friend of every prospect on his list of customers, certain, possible and even improbable. He knows every member of every prospect's family by their first names. He knows where the children go to school and what grades they are in. He knows what dishes the prospect's wife cooks best and what the prospect likes to eat. He pitches hay with him; helps him plow. He knows what crops the prospect has planted and how his prospective income varies with market fluctuations. He knows when the prospect's notes are due at the bank and how much he owes. He knows when his customer has money coming in, and how much.

If a customer's machinery breaks down at a critical time, the implement dealer will go out himself to help get it running again. He helps his customers get the labor that they need. He follows them through the year and knows exactly what condition every piece of farm machinery is in from month to month. He knows when to press for a sale and when he had better postpone his sales talk.

Is it any wonder that a few years ago when the implement dealers began to sell motor trucks to the farmers, that they registered a most astonishing success? At any rate they did and the fact is all the more astonishing because some implement dealers must cover a territory embracing as much as five counties, and this is out where counties are counties, if you get what we mean.

Another interesting fact about the implement dealers is the length of service that many of them have enjoyed with a single manufacturer. It is no uncommon matter to find an implement dealer who has been handling a single line for forty years. In all that time relations between dealer and factory have been maintained on a basis satisfactory to both. In other words, both sides of the bargain have made satisfactory profits. And if this isn't a lesson to manufacturers in the desirability of keeping the same dealers working for them we do not know what it is.

To a good many automotive merchants, we would like to say: "Go and watch a live farm implement dealer cultivate his prospect list."

Service Sales

IT will scarcely surprise students of automotive affairs to be told that service sales are now running strongly in most sections of the country. The Automotive Daily News is now engaged in a survey of nation-wide scope of the service division of the industry. Reports so far received indicate that after a slow start early in the year, service operations have steadily risen and now are at a highly satisfactory level.

It is, of course, obvious that in a year which has seen so definite a tendency to delay in the buying of new cars, the need for keeping the old ones running must become insistent. Dealers who have not been able to make money from service operations this year had better investigate and find out what is wrong with their maintenance departments.

It may quite easily work out that many dealers who have not until now given the service department the attention it should have had, may have learned a lesson in 1930 that will bear fruit in years to come.

Ask Us to Tell You

In presenting this service department, The Automobile Daily News is actuated by the desire to help its readers solve their problems.

In some instances readers may desire information which will require an expenditure of money to secure, and in such cases we shall be glad to get the desired data at the least possible cost, or we shall inform our readers where they may obtain it most economically and expeditiously.

MIDGET WHEELBASE

QUESTION: While I was in England last spring I saw a small car which was called, if I recall correctly, the Midget M. G. Can you tell me how this car compares in wheelbase, horse power, etc., with the Austin, which is now being sold in this country?

ANSWER: The M. G. Midget has a wheelbase of seventy-eight inches, which compares with seventy-five for the Austin, and the power plant is listed as eight horse power. The Austin rating is seven horse power.

FOREIGN SHOWS

QUESTION: Can you please tell me through your question and answer department what dates have been set for the London, Paris, Berlin and Brussels automobile shows this year? Has there been talk of giving up the Olympia show in London? I have been informed that some of the British manufacturers favor giving up the show.

K. L. G., Philadelphia, Pa.

ANSWER: The foreign shows about which you inquire will be held as follows: London, October 16-25; Paris, October 2-12; Berlin, ——— 6-16 and Brussels, December 6-17. There was some talk about making the Olympia show a biennial event instead of the traditional annual exhibition, but nothing materialized from the talk and the usual event will be held this fall.

NEW STUDEBAKER GETS 113-HOUR CHICAGO TEST

Chicago, July 24.—A demonstration, which in addition to being a test of human endurance, served to bring out the economy of the new free-wheeling Studebaker Commander Eight, has just been completed in Chicago. Sponsored by the local distributors, the Studebaker Sales Company of Chicago, the trial is claimed to have set a new record of its kind for endurance.

By the terms of the test the car was driven by Bob Gorman who was handcuffed to the wheels, and results show, according to the Studebaker officials, that he drove continuously for 113 hours day and night without sleep, stopping only for traffic lights, gas and oil.

During this time the motor was never stopped. Better than fifteen miles per gallon was obtained. The car was equipped with a Transitone radio and amplifier, Gorman making occasional announcements as he drove through the streets. The test attracted a great deal of interest in various parts of the city, the car being covered wih painted signs telling the purpose of the run.

COMPULSORY INSURANCE RATES FOR 1931 STUDIED

Boston, Mass., July 24.—Compulsory insurance rates for 1931 are now being prepared by the insurance commissioner's office. The preliminary schedule will be announced some time in August, and a hearing will be held in September. It is likely that more zones will be established, which will bring about a shifting of the rates.

Twenty-two Massachusetts cities have been studied during the past year as to compulsory insurance results, individual claims being followed up and exact information obtained. This is the nearest approach that has yet been made to individual rating. A study has also been made of the experience of fleet owners, for rating purposes.

Shop Equipment Should Be Selling Tool, Says Brosch

GEORGE BROSCH, manager of the automotive merchandising and marketing division of the Business Training Corporation presents another of his short talks on successful service salesmanship.

That ales can be made by showing shop equipment to customers is one of the most obvious facts in the whole automotive trade. Merely to display the equipment where the customer can see it is not enough. The equipment should be used as a selling tool.

This statement does not imply that all bars should be lowered and that customers should be permitted to wander around the shop at their own free will, interfering with the mechanics who are working on their cars and, perhaps, criticising the methods used by the mechanics. What it does imply, however, is that in selling a car owner a specific job the service salesman should take the customer to the equipment that will be used on that job and tell him what it does, how it does it and what benefits he will get from the kind of work turned out by the equipment. There is no easier way to sell service.

SUPPOSE, for instance, as often happens, another car is already in the shop undergoing the same operation that the customer's car requires. The simplest method of making the customer realize what he will get for his money is to take him to the other job and let him see, with his own eyes, the care and precision with which the work is performed. If this method cannot be used, it is almost equally effective to show him the equipment itself and demonstrate the way it operates. A car lift or a tire spreader, to name but two of many good examples, will sell service jobs just as swiftly as any salesman, if you give them a chance to speak for themselves.

Of all equipment in the shop, the items that should be used most constantly in demonstrating are the various devices used in testing. Brake testing machines, electrical test benches, spark plug testers, cylinder gauges and all similar equipment offer the service salesman scores of easy opportunities to show the customer what he needs and increase his reliance on your ability to locate his trouble. The more freely such equipment is used in the actual presence of the customer, the better. He is interested not only in your ability to do good work **but also in your ability to find out what he needs.**

FOR precisely the same reasons, parts also should be shown to the car owners. A good display of parts will convince the car owner that you deserve to get his business. But it may not sell him on buying the specific job you are trying to make him buy. To get the full sales value from your parts stock, it is necessary—and well worth while—to show him the exact parts that should be used as replacement in his car.

The demonstration need not be complicated. Placing two gears together, showing the customer how perfectly they mesh, and telling him how accurately they are cut and how rigidly they are inspected before they leave the factory, may be quite sufficient demonstration to clinch a doubtful sale. Placing a piston pin in the customer's hand, so that he can feel how smoothly it is finished, may be all that is needed to build up his confidence to the buying point.

In some cases — although this method should not be used to excess —the most convincing method of demonstrating the need of a service job is to give the customer a chance to compare the appearance of new parts with that of parts which are worn to about the same degree as those in his own car. Whenever this method is used it should be coupled with a careful explanation of the fact that a certain amount of wear is to be expected under ordinary conditions. **Don't give the customer the idea that wear is evidence of the use of unsatisfactory parts.**

Here is the way a service salesman in Oregon handled a demonstration of this type in selling a reconditioning job:

"Under average running conditions," he said, "a certain amount of wear is only to be expected. Even a fine watch requires occasional adjustment and replacement of parts. Now here is an old piston that's in just about the same shape as those in your engine. As you see, when I measure it, this old piston is worn where it rubbed against the cylinder wall. It has done that until it is out of round. Naturally, the cylinders are out of round, too, so you are losing a lot of power and you're burning far more gasoline than you should be." Then, after discussing the results of oil dilution and its effect on bearings, he picked up a new piston. "If we true up your cylinders and fit them with new pistons like this," he said, "your cylinders will be in first-class shape. This piston is exceptionally well made. For example——" and he went on to explain the advantages of the particular piston he proposed to use.

When you show parts to the customer **tell him who made them.** Whether or not he knows anything about automotive affairs he will be glad to receive assurance that the parts are made by a reputable manufacturer. He will be impressed by your reference, if you handle the point properly. Here is the method used by a service foreman in Santa Barbara:—

"This bearing, Mr. Jones, is made by the ——— Company. That is your best possible assurance that you will get a satisfactory, trouble-free job. Reliable parts are the basis of good work, and that's what you really want, isn't it?"

Every reputable retailer who buys parts takes considerable pains to protect his own reputation by buying reliable parts. By doing so he provides himself and his salesmen with a powerful selling point. **Make full use of this point. It will build both immediate sales and future business.** Tell your customers about the quality of the parts you use and let them pass the word along to their friends.

PROPERTY OF CIVIC OILS SOLD TO GASETERIA, INC.

Indianapolis, Ind., July 24.—Property of the Civic Oil Company, including bulk storage tanks with a capacity of 48,000 gallons and eight retail pumps, has been purchased by Gaseteria, Inc., an independent retail operator with seven other stations, five in Indianapolis and one each in Evansville and Terre Haute. The company markets its own brand of gasoline and oil as well as several nationally advanced lubricants. Officers are Russell Williams, president; Phil Williams, vice-president, both of Indianapolis, and Frank Bernard of Muncie, treasurer.

COMING EVENTS

AUGUST

26-28—**Chicago, Ill.** Society of Automotive Engineers aeronautic meeting in conjunction with National Air Races.

SEPTEMBER

22-26—**Chicago, Ill.** American Society for Steel Treating meeting at Stevens Hotel.

29-Oct. 4—**Pittsburgh, Pa.** National Safety Council Annual Safety Congress.

OCTOBER

2-12—**Paris, France.** Automobile Salon.
6-11—**Washington, D. C.** Sixth International Road Congress.
6-11—**Washington, D. C.** American Road-builders' Association Convention.
8- 9—**Detroit, Mich.** Society of Automotive Engineers production meeting at Book-Cadillac Hotel.
22-24—**Pittsburgh, Pa.** Society of Automotive Engineers' transportation meeting.
16-25—**London, England.** Olympia Motor Show.

NOVEMBER

6-16—**Berlin, Germany.** International Automobile Show.
8-15—**Chicago, Ill.** Automobile Salon at Drake Hotel.
10-14—**Cleveland, O.** Motor and Equipment Association Show.
17-21—**Cleveland, O.** National Standard Parts Association Show.
30-Dec. 6—**New York.** Automobile Salon at Hotel Commodore.

DECEMBER

6-17—**Brussels, Belgium.** Automobile Exhibition.

JANUARY

3-10—**New York.** National Automobile Show.
24-31—**Chicago, Ill.** National Automobile Show.

G. M. Cash and Securities Holdings Gain $48,000,000

(Continued from Page 1)

that, notwithstanding the prevailing unsatisfactory conditions and the subnormal rate of operations, the strength of the corporation's financial position has been well maintained.

"The unfavorable comparison of profits recited above, in relation to the previous year, is a direct reflection of the current economic conditions prevailing not only in the United States, but in practically all other markets of the world that normally are important factors in the absorption of General Motors products.

"Dealing with the relationship of volume of this year as compared with last, it is gratifying to note that, notwithstanding the reduction, the corporation's percentage of the total automotive business, as measured both by units and dollar volume, has been well maintained.

"While the decrease in earnings from the standpoint of our stockholders is naturally to be regretted, it is felt that the relation of earnings to volume in comparison with the previous year is a favorable one, as it is a recognized fact that a falling off in volume is normally accompanied by a much greater reduction in profits because of the influence of fixed or uncontrollable expense which must go on, to an important degree, irrespective of conditions. Expressed otherwise, with a reduction in dollar volume of 30.1 per cent., the reduction in net operating income has been 35.2 per cent.

"The relationship, or the result just described, was made possible because of an early anticipation that the change in economic conditions which developed during the late summer of 1929 might prove to be more formidable and far reaching than was generally appreciated. On the basis of this, General Motors determined to readjust its operations in the expectation of a decline in volume in 1930. With the full and whole-hearted support of every member of the organization, a program of adjustment was instituted. Every expense was exhaustively scrutinized with a view to reappraising its value in relation to its cost when measured by the changed circumstances. It is believed that a creditable result has been accomplished in thus adjusting the corporation's operating structure in harmony with the changed economic conditions.

"While it is to be regretted, from the standpoint of all concerned, that knowledge of the fundamentals of economics and philosophy of industry has apparently not yet developed to the point where the business cycle can be said to be under control, on the other hand, it appears to me if we view the situation with the right attitude of mind, that an opportunity is presented not only to General Motors but to all other business and industrial organizations of establishing higher standards of effectiveness.

"If we are frank with ourselves, we must admit that during any long period of prosperity, such as we have recently passed through, inefficiencies will creep in; we become less sensitive as regards the relationship of expense and result; we become too self-satisfied; our attitude towards intensive work becomes less constructive. If we will recognize and capitalize these and other influences and thus establish new and still higher standards, then when the business adjustment has been completed—which is only a matter of time—we can go forward with renewed strength and still greater confidence in our ability to cope with the problems of the future. We are striving earnestly to do that very thing in General Motors."

OTHER FINANCIAL NEWS

MICHIGAN STEEL CORPORATION

Report of Michigan Steel Corporation for six months ended June 30, 1930, will show the full year's dividend requirement of $2.50 a share on the no-par common stock earned by a substantial margin.

Earnings for the second quarter ended June 30 are estimated to be in excess of $340,000 after charges and taxes, equal to more than $1.50 a share on 220,000 shares of no-par capital stock. This compares with $322,281, or $1.46 a share in preceding quarter and $592,667, or $2.69 a share, in second quarter of 1929.

On basis of second quarter estimate profit for six months ended June 30, 1930, exceeded $660,000, equal to better than $3 a share on the stock. In the first half of 1929 company reported profit of approximately $1,180,000, or $5.36 a share.

Sharp curtailment in automobile production, reduced prices for its products and plant improvements, financed to some extent from earnings, are reflected in lower net income.

The third quarter probably will reflect the two-week shut-down by a number of motor manufacturers, but this is likely to mark the low point of operations, and the remainder of the year holds greater promise. Leading units in the motor industry probably will increase their operating schedules later in the year. Production has been greatly curtailed all the year and stocks of cars in dealers' hands are at a low point. Introduction of new models is likely to stimulate demand, which should be directly reflected in the operations of Michigan Steel.

Notwithstanding depressed conditions in both the steel and automobile industries this year, operations of Michigan Steel to the end of May averaged 98 per cent. of capacity. Company has under way an expansion program which will increase its capacity approximately 30 per cent. and bring about substantial savings in production costs. This program is scheduled to be completed this fall.

TRUCKERS OF 2 STATES PLAN OMAHA TERMINAL

Omaha, Neb., July 24.—Committees representing the Omaha Manufacturers Association, the Nebraska Motor Transport Association, and the Southwest Iowa Truckers Association, meeting jointly in Omaha, voted to work for the establishment of a $50,000 trucking terminal, and to sound out sentiment among jobbers and truckers in the two states on this subject. Questionnaires will be sent to each member of the three organizations, and the sentiment reflected will be the determining factor on what action will be taken at a meeting scheduled for September.

Erection of a terminal here would put all truckers operating from it in the class of common carriers, insuring the public on all deliveries, it was pointed out. A favorable attitude toward a terminal was expressed by most of the speakers.

CLARK

Meeting Service Conditions Squarely *and "standing the gaff"*

CLARK AXLES *and* METAL WHEELS

CLARK EQUIPMENT COMPANY
Buchanan Michigan

AXLES Front & Rear
WHEELS Single or Dual Tire
CAST STEEL HOUSINGS
TRANSMISSIONS

WISCONSIN AXLES

Experience is continually pointing out the low operating expense of Wisconsin Axles.

WISCONSIN AXLE CO.
Oshkosh Wisconsin

Cumulative New Commercial Car Registration Statistics, June, 1930

Returns for today: Florida, Idaho, Maryland, Minnesota, Missouri, Montana, Rhode Island, South Carolina, South Dakota, Utah, West Virginia.

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies. **Commercial Car Registrations do not include buses.**

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Arkansas			81		1				70		9											3				164	Ark., '29
Delaware		1	33		1	1			50	2	3	3			2				1							97	Del., '29
Florida		2	95		4	1			218	3	8	3	1		6							2				343	Florida
Idaho			81		5				97	2	20	1			2		2					2			3	215	Idaho
Illinois	1		442	58	45		2	4	590	28	110	9	2	1	18		1	2	1		6	8	5	2	50	1385	Illinois
Maryland	8	14	112	5	12	1	2	3	237	17	30	27			5	1			3	1	1	18	5		4	506	Maryland
Minnesota		3	238	23	22		3	2	376	7	69	2		1	7	1	1			1	3	2	13		7	781	Minn.
Missouri	4	5	306	12	25	1	2	2	429	26	33	10	1		5	2			2	2	4	13	6	1	14	905	Missouri
Montana			45		4		2		78	4	16				1					1	1	1				153	Montana
N. Dakota			58		7		3		85	3	32				3					1	2		1	1		196	N. Dakota
Rh. Island	6	4	39		5	1	5		74	13	9				8			3		3		1	1			172	Rho. Isl.
S. Carolina			90		2				163	1	4	2			1										6	269	S. Car.
S. Dakota			57	1	4		1	2	60		45				8		1		1	2		1	8		4	195	S. Dakota
Utah			72		10				136	5	9	2	1		2		3					1			4	245	Utah
W. Virginia		3	112	2	14				189	20	39		1	2	5		2		1		2	5	3		2	402	West Va.
Wisconsin		6	405	10	31		4	5	462	23	82	5		1	19		1	3	5	1	3	6	8		14	1094	Wisconsin
Dist. of Col.	5	1	23	3	9				91	7	1	3		1	1			3				1			4	153	D. C.
Totals	24	39	2289	114	201	5	24	18	3405	161	519	67	6	6	93	4	11	11	14	12	22	64	50	4	112	7275	Totals
Ark., '29		1	132		8				140	4	27	3									4	4			1	324	Ark., '29
Del., '29	3		46		3		1	1	80	9	6				3		1	1	1	1						156	Del., '29
Fla., 1929		5	117	1	15		1		285	10	17	9			4	2					2	10				478	Fla., '1929
Idaho, '29			135		19		1		134	9	23	4			9		1			3	2	5		1	1	347	Idaho, '29
Illinois, '29	5	10	445	66	92		11	3	783	32	115	36		1	34			4	1		18	17			66	1739	Ill., 1929
Md., 1929	8	10	155	7	48		3	5	267	9	52	21		1	23	2	1	6	1		1	15			18	653	Md., 1929
Minn., 1929			315	2	28		1	4	456	21	96	5		1	16		1			5	10	8		2	5	976	Minn., '29
Mo., 1929	4	5	402	13	72		7	2	586	73	88	9		1	21	1			3	3	12	8			15	1325	Mo., 1929
Mont., '29			68		16		4	5	157	6	30	7			5	1	1				3	11		2	2	318	Mont., '29
N. D., '29			101	3	8		1		117	12	68			1	4		1				2			1	1	320	N. D., 29
R. I., 1929	5	2	75	3	27		5	5	88	23	6	17			25		2	2	3	2		5		1	7	303	R. I., 1929
S. C., 1929			173		13		3	4	171	6	11	8			2						2	1			3	397	S. C., '29
S. D., 1929			116		9		2		98	1	68	1			10				1		1	3				310	S. D., 1929
Utah, 1929			118		29		2		248	3	22	10			12		2			3	3	7		1	3	463	Utah, '29
W. Va., '29		5	169	3	42			6	219	21	33	4		2	13		1		1	1	5			2	2	529	W. Va., '29
Wis., '29		3	509	28	76		6	6	773	46	113	4		8	41		1	11	7	5	15	7		2	16	1677	Wis., '29
Dist. of Col.	3	4	49	3	12				187	5	10	14		3	5		1	6	3		1	7			5	318	D. C., '29
Totals, '29	28	45	3125	129	517	*	48	41	4789	290	785	152	*	18	227	6	13	30	21	23	81	108	*	12	145	10633	Totals, '29

*Not in production at that time.

MERCHANDISING ACCESSORIES EQUIPMENT

WHOLESALE

DISTRIBUTION SHOP EQUIPMENT REPLACEMENTS

SOUTHERN JOBBERS ENTHUSED OVER FALL, WINTER OUTLOOK

Decided Optimism Displayed as Association Convention at Asheville Ends—No Major Problems or Business Worries Faced at Meeting.

ASHEVILLE N. Car., July 24.—Encouraged by favorable reports on business from the majority of cities in the South, jobbers and manufacturers of the Southern Automotive Jobbers Association, departed from their semi-annual convention here yesterday after expressing decidedly optimistic views toward fall and winter sales prospects.

For the first time in many years, the jobbers were able to hold a convention without being confronted by a program of heavy problems and business worries to contend with, officers stated. Practically all of the problems discussed have been along economic lines and of minor importance. For the majority of dealers and jobbers, sales have been good during the past six months and indications point to good business this fall and winter.

In Asheville, Charlotte, Knoxville and other Southern cities, automobile and parts sales have held up unusually well, despite the business depression which has affected virtually all sections, and, although no sensational increase in turnover and profits is expected, the general trend of the automobile jobbers' business in all sections of the South is healthy.

This is the story told at all sessions of the convention by representative jobbers from many states.

President H. W. Cameron of Chattanooga, Tenn., presided over the convention. Leading speakers included Dr. Gus Dyer of The Southern Agriculturist and former professor of economics at Vanderbilt University, and Editor Neal Adair of Motor, New York city.

According to Dr. Dyer, the economic advantages of the South are sufficient to enable it to surpass the North in progress, once the business depression has passed. Quoting many statistics on various manufacturers' records and business records, Dr. Dyer in support of his assertion declared that during the past six months the consumption of automobiles decreased 48 per cent. in the North and only 22 per cent. in the South.

New Manley Compressor

A new compressor for garages, super service stations and filling stations where room is at a premium is announced by Manley.

This compressor takes up only a floor space of 22x20½ inches. The motor is directly connected with the compressor and both are on top of the tank.

The "shudder proof shock insulators," connecting link between the pump and talk, reduces vibration and noise.

KELLY-SPRINGFIELD PICKS DEALERSHIP FOR DULUTH

Duluth, Minn., July 24.—The Northern Motor Company, Oldsmobile and Viking dealer, at 723 East Superior St. in Duluth, is now retailing Kelly-Springfield tires here and operating a warehouse for the same tires covering Northern Minnesota, Wisconsin and Michigan.

N. S. P. A. Gives Reasons For Voting Down Offer Of M. E. A. for Joint Show

The board of directors at the mid-summer meeting held in Cleveland, voted in favor of the N. S. P. A. holding its own separate show in 1930. Negotiations had been pending between the N. S. P. A. and the M. E. A. for a combined show next November, comprising the manufacturer members of the two associations.

Approximately 50 per cent. of the manufacturer members of the N. S. P. A. belong to the M. E. A., and in consideration of the financial situation throughout the country, the dual members have quite logically favored a joint show for one week in preference to two shows for two weeks, realizing that the saving in time as well as in expense would represent an economic benefit.

This benefit does not necessarily accrue to the other 50 per cent. of the N. S. P. A. manufacturers, who belong to but one association, and prefer to maintain an intact show.

While it is true that jobbers of the A. E. A. (subsequently the M. E. A.) have been invited to and made welcome at each and every N. S. P. A. show, this recognition has not been reciprocated heretofore, because of the "closed show" conditions of the other association—conditions they propose to remove by inviting N. S. P. A. jobber members to their 1930 show, which should obviously create a more constructive and co-operative sentiment between the two jobber groups.

Editor's Column

WILLIAM G. ADAMS, managing director of the National Council of Traveling Salesmen's Associations, struck a decidedly optimistic note in his address to members attending the recent sessions of the convention in New York city.

Mr. Adams believes that late August or early September will see a substantial improvement in business and usher in a new era of increasing prosperity. In part, he said:

"I should like to preface my report with a few comments on the improving business situation, as it now appears to be shaping up in the reports coming to us from the thirty-eight affiliated trade associations of the National Council.

"There are increasing indications that the present cycle of depression has reached the low point of its down curve and is steadying out for a slow spell during the summer months, with good prospects of a substantial pick-up beginning in late August or early September.

"The action of the stock market and produce exchanges indicate the downward trend has been interrupted. Wheat and cotton have rebounded from their loss, while copper and other metals have rallied from their recent drop.

"Another of the favorable indications is that retail prices are rapidly being adjusted to the lower wholesale costs. The announcement of a number of metropolitan stores in the papers during the last week that they are offering new and wanted merchandise at prices substantially below the sale prices of a year ago gives eloquent evidence that retail store shelves are comparatively light and that this tremendous market is ready to absorb new lines. In the last depression there was a serious delay due to the unwillingness of retailers to 'take losses' on account of the heavy overstocks that had been built up during the after-war period. Fortunately, we do not have this situation to contend with at the present time."

Wholesale Brevities

Paterson, N. J., July 24.—The World Bestos Corporation of this city announces the appointment of G. H. Kelly as district manager in charge of sales under J. N. Kirk, sales manager. Mr. Kelly's district includes Iowa, northern Michigan and Wisconsin, Minnesota, part of Illinois and the two Dakotas. He will maintain headquarters in Minneapolis.

Fredonia, N. Y., July 24.—The United States Auto Supply has been established at 65 West Main St., as a partnership by Ralph N. Colburn and Ralph H. Smith. A full line of accessories and equipment has been installed, including Goodyear rubber products and USL batteries.

CUMULATIVE NEW PASSENGER CAR

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising
desring county, city or town lists, or lists of owners in any given

Some of this data has been published previously, but it is

Returns for today:

States	Auburn	Austin	Black Hawk	Buick	Cadillac	Chevrolet	Chrysler	Cord	DeSoto	Dodge	Durant	Essex	Ford	Franklin	Gardner	Graham	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Arkansas	1	1		17	1	280	14		9	23	6	14	430			7	5	2		2	2
Delaware	1			43	11	189	35	1	5	5	11	13	348	1		7	6	10		5	1
Florida	4			56	5	675	74	1	28	37	5	47	1239	6		46	32	14		10	2
Idaho	1			20		256	16	1	8	25	21	19	381	1		9	9	4			1
Illinois	68		1	532	61	3117	490	26	298	449	71	314	6752	58	8	232	167	217	1	88	46
Maryland	12			111	7	1066	83	1	24	69	18	99	1429	4		72	31	45	1	11	4
Minnesota	7			73	6	1725	139	3	43	92	23	69	2789	2	3	93	35	53		14	3
Missouri	18	1	3	127	19	1893	140	8	60	159	31	100	2857	8	12	114	55	51		25	3
Montana	5			23	3	270	26	2	29	22	13	26	369	6		4	9	14		7	
N. Hamp.	10			35	3	270	38		19	30	8	46	573	2		17	13	18	2	3	1
N. Ca'lina	1			56	4	910	81	1	26	86	2	46	1599	2		30	37	10		1	3
N. Dakota	1			15	1	590	47		8	35	23	23	831	1		17	12	2			
Rh. Isle.	8			63	6	332	70	1	66	50	10	44	604	4		25	15	15		8	2
S. Carolina				23	1	389	16		23	20	2	26	799	1		5	15	9			1
S. Dakota	3			27	1	645	54		10	61	25	42	825	1		16	13	19			
Utah	9			20	5	324	34	2	31	42	45	35	586	2		33	17	9		3	
W. Va.	6			42	2	805	63	3	35	129	29	69	1265	6		60	30	21	1	8	2
Wisconsin	19		1	158	14	1666	168	2	71	170	48	160	2591	14	1	96	71	36	2	6	1
D. of C.	11			57	7	431	32	1	18	33	13	46	1078	3		39	22	32	1	15	5
Totals, '30	185	2	5	1498	157	15833	1620	53	811	1537	404	1238	27345	122	24	922	594	581	8	206	77
Ark., '29				27	6	457	44		33	59	26	32	873	2		16	11	3		6	2
Del., '29	14			22	7	197	12		1	9	42	57	407	3		2	16	7		10	
Fla., '29	5			109	9	770	102		27	86	7	128	1705	13		71	64	38	3	17	6
Idaho, '29	3			57		523	28		49	82	97	75	747	2	1	30	27	11			1
Ill., '29	206		8	647	141	3333	574		409	785	234	1325	6742	50	27	473	558	323	6	215	60
Md., '29	17		4	123	11	1253	118		50	102	56	266	1669	10		44	66	55	2	19	1
Minn., '29	36		2	145	9	1741	119		85	159	140	375	3930	7	2	142	124	67	2	21	8
Mo., '29	30		2	266	28	2245	128		87	263	145	540	3614	28	20	125	110	86	4	51	23
Mont., '29	24			71	4	561	65		47	125	66	135	773	13		54	56	16			3
N. H., '29	8			48	4	334	42		50	47	43	117	482	9		29	29	14	1	10	2
N. C., '29	6			89	5	1224	132		60	146	32	192	2402	4	1	24	78	13		8	3
N. D., '29				36	2	706	38		35	72	57	66	1217			29	24	2		4	1
R. I., '29	32		1	122	14	524	89		101	86	26	162	629	17	3	69	41	28	4	24	3
S. C., '29				42		711	43		27	31	3	58	1251	1		10	30	6		2	1
S. D., 29	9			73	1	962	56		39	122	129	111	1544	4		59	34	42		4	
Utah, '29			1	37	4	345	20		26	82	107	112	620	3		38	31	17		4	
W. Va., '29	7		4	92	2	1136	96		93	173	61	237	1354	4		98	43	26	3	14	4
Wis., '29	43			441	17	2599	240		202	327	178	897	3864	34	4	273	271	87	3	30	10
D. of C., '29	11			90	17	376	57		19	20	9	137	950	8	1	61	36	34		15	3
Totals, '29	451	*	22	2537	276	19997	2003	*	1440	2776	1458	5022	34773	212	59	1647	1649	875	28	454	131

*Not in production at that time.

New Hampshire New Car Sales Off 12.3% in 6 Months

FORD, CHEVROLET BOTH SHOW GAINS

Registrations for June Are in Seasonable Decline

NEW YORK, July 24.—New car sales in New Hampshire in June were 25.6 per cent. behind June a year ago, while in the first six months registrations decreased only 12.3 per cent.

Ford's sales were ninety-one units ahead of June last year, but were 163 units behind May of this year. In the first six months Ford had a total of 2,521 sales, as against 2,071 in the first half of 1929, a gain of 450 units. Chevrolet, with a total of 1,549 in the half year, was fifty-five units ahead of its 1929 record.

Auburn in June gained over the same month a year ago and over May of this year. Makes showing gains over June, 1929, were Hupmobile and Reo. Those gaining over last May were La Salle, Marmon-Roosevelt and Packard.

In the first half many makes showed gains over 1929. Those showing gains in addition to Ford and Chevrolet were Auburn, Cadillac, Chrysler, Hupmobile, Marquette, Pierce-Arrow and Reo. Peerless tied its 1929 mark. Hudson was four units and Lincoln two units behind.

The registration for the first six months, compared with the same period last year follows:

	June 1930	June 1929	May 1930
Auburn	10	8	8
Blackhawk	1	*	1
Buick	35	48	87
Cadillac	3	4	9
Chevrolet	270	334	424
Chrysler	38	42	54
Cord	2	*	2
De Soto	19	50	30
Dodge	30	47	32
Durant	8	43	21
Essex	46	117	66
Ford	573	482	736
Franklin	2	9	9
Graham	17	29	31
Hudson	13	29	30
Hupmobile	18	14	21
Jordan	2	1	..
La Salle	3	10	2
Lincoln	1	2	2
Marmon-Roosev'lt	11	24	4
Marquette	7	16	12
Nash	44	88	56
Oakland	7	19	23
Oldsmobile	25	53	41
Packard	16	24	10
Peerless	..	2	6
Pierce-Arrow	3	4	5
Plymouth	52	63	63
Pontiac	30	89	55
Reo	13	11	24
Studebaker	20	35	32
Viking	1	4	..
Whippet	6	77	16
Willys	16	*	27
Willys-Knight	6	19	9
Miscellaneous	..	24	..
Total	1,345	1,807	2,268

*Not on market at that time.

Following are the registrations for the first half of the year compared with the same period in 1929:

	1930	1929
Auburn	38	28
Blackhawk	1	*
Buick	265	286
Cadillac	26	20
Chevrolet	1,549	1,494
Chrysler	184	172
Cord	2	*
De Soto	136	173
Dodge	135	195
Durant	67	147
Essex	251	576
Ford	2,527	2,071
Franklin	25	47
Graham	77	117
Hudson	64	68
Hupmobile	18	14
Jordan	3	12
LaSalle	18	33
Lincoln	5	7
Marmon-Roosevelt	27	80
Marquette	32	16
Nash	198	369
Oakland	60	71
Oldsmobile	142	193
Packard	50	80
Peerless	9	9
Pierce-Arrow	16	10
Plymouth	160	189
Pontiac	183	338
Reo	75	46
Studebaker	130	179
Viking	3	6
Whippet	43	371
Willys	102	*
Willys-Knight	38	74
Miscellaneous	....	36
Totals	6,718	7,661

*Not on market at that time.

WILLYS-KNIGHT DEALER FLIES PLANE TO RALLY

Philadelphia, July 24. — Wesley Harvey, a Willys-Knight dealer of Tunkhannock, Pa., near Scranton, wishing to attend the Willys-Knight dealers' meeting held by Herbert Brothers, Philadelphia distributor jumped into his airplane and in one hour and ten minutes arrived at the airport in Camden, N. J. where he was met by a representative of Herbert Brothers. The complete trip from Tunkhannock to the distributor's place of business, at 1409 North Broad St., consumed only one hour and thirty minutes.

Firm's 54 Trucks Without Accident for 56,808 Hours

JERSEY CITY, N. J., July 24.—A record of 56,808 hours of operation without a single accident has been rolled up by the fifty-four drivers of one concern, accroding to the June report of the inter-fleet drivers' safety contest, conducted by the Hudson County Safety Council.

This, the Safety Council points out to the 1,026 drivers participating in the contest, is the best sustained record made by any fleet in the ten months in which the contest has been conducted, and was made by the Janssen Dairy Company of Hoboken. The next best record was made by the fifteen drivers of the R. H. H. Steel Laundry Company of Jersey City. This fleet heads the twenty-two fleets in the contest who have operated for ten months without a single accident. The fifteen drivers of the laundry company have a total of 34,623 hours to their credit without an accident.

The Safety Council reports that the twenty-two no-accident fleets, with 139 drivers, have operated a total of 301,546 hours without an accident over a ten-months' period.

The June record of 1,026 drivers in the contest was not quite as good as in May, according to the Safety Council report. The average number of hours operated per accident by all of the fleets in June was 5,703 as against 5,881 in May. Ten of the sixteen groups in the contest, however, are reported to have made an improvement over the preceding month.

The twenty-two honor fleets in the contest are:

Bayonne—Louis Cohn & Sons, Cohen's Furniture Store, Vacuum Oil Company, Standard Oil Company (Bayonne Refinery), Edward F. Clark, Steinberg Furniture Company.

Hoboken—Charles S. Schultz & Son, William J. Duffy Company, United States Post Office.

Jersey City—Lewis Max & Sons, L. O. Koven & Bro., C. F. Mueller Company, C. A. Woolsey Paint and Color Company, Mountain Ice Company, R. H. H. Steel Laundry Company, A. H. Beatus, J. C. Ladder Company, White Foundry Company, Hudson County Storage and Trucking Company.

North Hudson — Gardner and Meeks Company, Corn Products Refining Company, Alaska Chemical Company.

PORTLAND FIRM NEARLY DOUBLES SALE OF USED CARS; BUICK IN DEMAND

Portland, Ore., July 24.—The sale of used cars, according to W. C. Kelt, used car manager for the Portland branch of the Howard Automobile Company, will probably break all previous records this year if present indications mean anything. He revealed that the sales of used cars by his firm during the first five months of the year were almost 100 per cent. greater than for a similar period in 1929.

"From January to May, inclusive," Kelt stated, "our firm sold 644 used cars this year, whereas 356 used automobiles were purchased from us during the same month last year. Another noteworthy fact is that motorists are purchasing a greater percentage of Gold Seal Buicks than ever before.

An average of thirty-one men are employed in the Howard paint, motor, body, carpenter and machine shops—devoting practically their entire time to the reconditioning and testing of used cars.

HOOSIER STATE DEALERS RE-ELECT PROPS LEADER

Indianapolis, Ind., July 24.—Officers of the Hoosier State Auto Association, affiliated with the A. A. A., were re-elected at a meeting held here last week. J. Cooper Props, Muncie, former head of the state dealers' association, was again chosen president; R. W. Chambers of Evansville, C. W. Lanz of Bedford and C. B. Kern of Lafayette, vice-presidents; W. L. Hubbard, Scottsburg, treasurer, and M. E. Noblet, Indianapolis, secretary-manager.

Reports on safety and accident prevention work were heard, which resulted in an appeal being broadcast to motorists to help reduce the toll of lives and injuries and for the exertion of all forces toward enforcement of vehicle laws.

NEW CHRYSLER EIGHTS SHOWN IN NASHVILLE

Nashville, Tenn., July 24.—Approximately thirty-five automobile dealers assembled at the Andrew Jackson Hotel as the luncheon guests of R. W. Hartwell, president of the Hartwell Motor Company, Chrysler distributor for middle Tennessee and southern Kentucky.

The gathering, which combined luncheon and business meeting, was held prior to the showing of the new Chrysler eight models, which were exhibited to the dealers during the afternoon.

The following Chrysler officials addressed the meeting: H. V. Ludlow, assistant manager of the Chrysler Corporation; Edward Hatfield, special representative of the Chrysler Sales Corporation, and J. Herrstrom, body engineer of the Chrysler Corporation.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

REGISTRATION STATISTICS, JUNE, 1930

Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers section, may obtain these by addressing any of these three companies

given here complete for the convenience of our subscribers

North Carolina

States	Marmon	Marquette	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Studebaker	Stutz	Viking	Whippet	Willys	Willys Knight	Windsor	Miscellaneous	Totals
Arkansas		4	9	3	4	1		3	21	8		10			2	2	1			882
Delaware	1	3	3	5	4	17		2	22	29		9			3	6	1		1	798
Florida	13	17	23	12	27	16		3	58	52	12	10		2	10	10	8			2,554
Idaho		10	16	6	8	1			31	18	1	16			9	5	1			894
Illinois	72	124	405	97	446	323	13	42	543	409	38	422	6	17	82	186	88	20	10	16,339
Maryland	11	20	66	32	59	57	1	8	111	98	12	73			36	37	16	23		3,747
Minnesota	12	20	76	37	104	32	1	2	392	181	13	116		2	67	124	26	1	1	6,379
Missouri	27	30	112	49	143	70	3	32	190	141	9	63		4	73	104	23	15		6,772
Montana	5	4	25	11	9				37	33	4	15			16	13	5			1,005
N. Hamp.	11	7	44	7	25	16		3	52	30	13	20		1	6	16	6			1 345
N. Ca'lina	5	27	19	10	29	15	2	2	74	49	3	21			13	22	3			3,189
N. Dakota	3	8	43	14	21	1			78	52	3	21		3	39	53	9			1,954
Rh. Isle.	2	8	44	17	22	30	12	9	49	51	17	27			3	19	15			1,648
S. Carolina	1	11	9	2	10	9			16	16	2	8			3	2	1			1,420
S. Dakota	5	12	24	6	87	7	1		81	37	2	44		2	24	28	3		1	2.106
Utah	7	8	17	16	21	12		1	22	19	3	23	2	1	4	2	2			1,357
W. Va.	23	18	41	32	40	28		3	118	91	5	46	1	3	45	76	16			3,162
Wisconsin	19	50	199	60	138	50	10	15	330	207	21	146		6	69	122	22		5	6,764
D. of C.	5	11	21	29	57	48	12	4	58	71	3	43			6	6	13		5	2,236
Totals, '30	222	392	1196	445	1254	733	55	129	2283	1592	161	1133	9	41	510	833	259	59	23	64,551
Ark., '29	6	5	23	10	9	4			65	53	2	6			54		2		1	1,837
Del., '29		13	34	10	13	10	2	2	25	67		15		3	37		7		1	1,045
Fla., '29	5	21	44	20	44	17	1	4	50	94	10	35	3	2	142		17	1	10	3,680
Idaho, '29		1	64	16	27	4			72	68	7	49		2	98		16			2,157
Ill., '29	216	157	1034	252	853	370	43	28	716	1396	128	490	12	68	1040		169	22	98	23,208
Md., '29	32	57	128	21	90	47	13	11	151	185	16	68	1	2	184		37		3	4,912
Minn., '29	31	34	146	58	179	46	11	12	395	533	20	158	2	8	667		102	7	15	9,538
Mo., '29	67	61	203	70	252	62	34	30	233	374	29	141	2	9	593		53	16	20	10,039
Mont., '29	35	23	96	17	51	10	1	3	117	102	13	58		1	145		31		3	2,719
N. H., '29	24	16	88	19	53	24	2	4	63	89	11	35	1	4	77		19		9	1 807
N. C., '29	2	53	39	24	57	15		1	109	172	9	43		2	183		11			5,139
N. D., '29	16	8	67	19	71	2			94	112	2	37	1	2	205		39		3	2,967
R. H., '29	21	15	75	14	51	26	17	11	80	144	36	52		6	94		42		9	2,668
S. C., '29	4	18	19	17	35	3		2	42	77	5	10	1	1	44		3			2,497
S. D., 29	30	11	78	13	138	8		1	150	125	10	86		4	312		32		3	4,190
Utah, '29	9	11	45	8	39	10		3	36	48	7	28	3	3	69		19		2	1,787
W. Va., '29	63	25	107	29	105	25	1	8	144	168	13	61		8	289		42		7	4,542
Wis., '29	86	64	579	153	394	83	25	14	520	938	44	269	2	18	847		103	1	39	13,699
D. of C., '29	22	27	59	22	98	39	8	11	25	138	9	51		4	48		15	1	8	2,429
Totals, '29	669	620	2928	792	2559	805	158	145	3087	4883	371	1692	28	147	5128	*	759	48	231	100,860

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	3650	Own	6	3¾x5	33.0	Pw	Str	Vac	DR	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6D
Am. La France W	3-4	3950	Own 2 R	4	4¼x6	28.9	CS	Zen	Vac	AB	Own	C	4	Own	2R	47.4	4	R	160	7200	S36x5	S36x5D
Am. La Fran. Chieftain	3-4	5500	Own	6	4⅛x5⅛	40.8	Pw	Zen	Vac	DR	Own	C	4	Tim	Wo	28.8	4	D	175	7200	S36x8	36x8D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	54.4	4	R	165	9800	S36x5	S40x6D
Am. La Fran. Big Chief	6	6725	Own	6	4½x6	48.6	Pw	Zen	Vac	DR	Own	C	4	Own	2R	32.8	4W	D	226	10600	S40x8	S40x8D
Am. La France Z	6½	5750	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	63.5	4	R	165	10000	S36x7	S40x7D
Am. La France U	7½	6000	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	—	63.5	4	R	165	10500	S36x7	S40x8D
Austin	—	*499	Own	4	2.2 x3	7.8	—	Til	—	Aut-L	W-G	U	3	Sal	Sp	—	4	4	75	——	3.75x18	3.75x18
Autocar A	1½-2	2700	Own	6	4 x4¾	38.4	Pw	Str	Vac	DR	Br-L 51	U	4	Own SA	Sp	27.9	4	R	150	5060	32x6	32x6
Autocar D	2-2½	3000	Own	6	4 x4¾	38.4	Pw	Str	Vac	DR	Br-L 51	U	4	Own SD	2R	33.7	4	R	150	5300	32x6	32x6D
*Autocar SH	2½-3	4300	Own	6	4¼x4¾	43.4	Pw	Str	Gra	RB	Own T	U	4	Own H	2R	44.3	R	R	114	6770	34x7	34x7D
Autocar SCH	2½-3	4300	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	4	Own H	2R	44.3	R	D	157	6860	34x7	34x7D
*Autocar H	3	4100	Own	4	4½x5½	32.4	CS	Str	Gra	AB	Own T	U	4	Own H	2R	48.6	R	R	114	6770	34x7	34x7D
*Autocar HS	3½	4600	Own	4	4½x5½	32.4	CS	Str	Gra	AB	Own T	U	4	Own C	2R	53.6	R	R	114	7900	40x8	40x8D
*Autocar SHS	3-3½	4800	Own	6	4¼x4¾	43.4	Pw	Str	Gra	RB	Own T	U	4	Own C	2R	53.6	R	R	114	7900	40x8	40x8D
Autocar SCHS	3-3½	4800	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	4	Own C	2R	53.6	R	D	157	8180	40x8	40x8D
Autocar TEA	3-3½	5350	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	12	Own TE	2R	101.7	4	D	192	8900	36x8	36x8D
Autocar TFA	3½-5	6100	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Own T	U	12	Own TF	2R	101.3	4	D	192	9300	38x9	38x9D
Autocar C	3½-5	5500	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Own B	C	4	Own C	2R	61.7	R	D	172	9500	42x9	42x9D
Autocar F	7½	6800	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Br-L 70	C	7	Tim	Wo	94.0	4	D	173	11000	36x7S	40x8DS
Autocar G	10	9000	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Br-L 70	C	7	Tim	Wo	97.7	WB	D	171	13000	36x8	36x8D
Brockway 65	1	1195	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	3	Col	Sp	21.3	4	Tr	137	3400	30x5	30x5
Brockway 75	1¼	1290	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	137	3450	32x6	32x6
Brockway 90	1½	1525	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	149	3650	32x6	32x6
Brockway 120	2	1990	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Brockway 140	2	2495	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	156	5500	32x6	32x6D
Brockway 170	2½	3160	Con	6	4⅛x4¾	40.8	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Brockway 195	3	3820	Con	6	4⅛x4¾	40.8	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Brockway 190	3	4185	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Brockway 220	3½	4560	Con	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Brockway 250	5	5950	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Tim	Wo	—	4HV	D	182	10000	40x8	40x8D
Brockway 290	7½	7250	Con	6	4¾x5¾	54.15	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7	40x14S
Brockway 640	10	9700	Con	6	4¾x5¾	54.15	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	R	212	14000	38x7	36x10S
Chevrolet	½	365	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	3	Own	Sp	13.61	4	R	107	1835	4.75x19	4.75x19
Chevrolet	1½	520	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	4	Own	Sp	33.46	4	R	131	2375	30x5	30x5
Commerce SRS 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Col 54028	Sp	25.5	4	D	142	3900	30x5P	30x5P
Commerce SRSS 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 54000	Sp	29.2	4	D	162	4300	30x5P	30x5DP
Commerce SR 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	4700	34x5P	34x5D
Commerce SRS 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 54000	Sp	29.2	4		162	4500	32x6P	32x6D
Commerce SR 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	4900	36x6	36x6D
Commerce SR 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	5100	36x6P	36x6D
Commerce SR 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706DH	Wo	63.0	4		175	7000	36x6P	36x6D
Commerce SR 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706DH	Wo	63.0	4		175	7100	36x6P	36x6D
Commerce SR 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700DP	Wo	98.2	B		175	8200	36x6S	36x12S
Commerce SR 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700DP	Wo	98.2	B		175	8400	36x6S	36x12S
Commerce SR 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 68700DP	Wo	95.0	B		175	9600	36x6S	40x14S
Day Elder M F	1¼	1345	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L	U	4	Tim 52000 H	Sp	24.2	4	D	135	3500	30x5	30x5
Day Elder G F	1½	2050	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L	U	4	Tim 54000 H	Sp	28.3	4	D	156	4400	30x5	30x5D
Day Elder H F	2	2500	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Br-L 35	U	4	Tim 63702 H	Wo	40.7	4	D	156	4900	S34x4	S34x7
Day Elder J F	3	3900	Con 18 R	6	4 x4½	38.4	Pb	Zen	Vac	DR	Br-L 51	U	4	Tim 65001 H	Wo	41.5	4	D	156	7000	34x7	34x7D
Day Elder K F	4-5	5000	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	DR	Br-L 60	C	4	Tim 66702 DH	Wo	55.2	4	D	162	9200	S36x5	S36x12
Day Elder N 6 W	7	6000	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	DR	Br-L 60	C	7	Tim SW 200 H	Wo	73.6	6	D	294	10000	34x7	34x7D
Diamond T 200	1	785	Bud	4	3¾x4½	22.5	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	128½	3050	30x5	30x5
Diamond T 215	1	885	Bud	6	3⅜x4	27.3	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	135⅛	3150	30x5	30x5
Diamond T 290	1½	1475	Her WXA 2	6	3½x4½	29.4	Pb	Zen	Vac	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5D
Diamond T 303	2	1745	Her WXB	6	3¾x4½	33.7	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	160¾	4850	32x6	32x6D
Diamond T 551	2½	2250	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	168	5600	32x6	32x6D
Diamond T 503	2½	2660	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Wo	—	4	D	174	6200	34x7	34x7D
Diamond T 506	2½	2820	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	2R	—	4	D	172½	6300	34x7	34x7D
Diamond T 602	3	3440	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	4	D	169½	7500	36x8	36x8D
Diamond T 606	3	3500	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	2R	—	4	D	186	7500	36x8	36x8D
Diamond T 700	3½	3740	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	R	D	162	8100	S36x5	S36x10
Diamond T 801	4	4140	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	C	7	Own	Wo	—	6WH	D	189½	8300	36x8	4 wh 36x8
Diamond T 1000	5	4420	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	4	Tim	Wo	—	R	D	170½	9700	S36x6	S40x12
Diamond T 1200	6	5600	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	180	11000	34x7	4 w h 34x7D
Diamond T 1600	8	6220	Her YXC 3	6	4⅝x4¾	51.3	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	190	11700	36x8	4 wh 36x8D
Diamond-T 1601	8	7500	Wak 6 R B	6	5 x5¾	60.0	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	12500	36x8	4wh 36x8D
Diamond T 2500	10-12	8000	Wak 6 RB	6	5 x5¾	60	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	13100	S36x7	4 wh 36x12S
Dodge Bros. U-1	½	545	Own	4	3⅜x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	14.28	4	D	109	1900	5.00x20B	5.00x20B
Dodge Bros. U-1	¾	695	Own	4	3⅜x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	21.68	4	D	124	2260	5.50x20B	5.50x20B
Dodge Bros. DA1	¾	795	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	3	Own	Sp	19.21	4	D	124	2360	5.50x20B	5.50x20B
Dodge Bros. U-1	1	795	Own	4	3⅜x4¼	21.3	Pb	Car	Vac	NE	Own	U	4	Own	Sp	36.13	4	D	133	2590	6.00x20B	32x6
Dodge Bros. DA1	1	895	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	33.45	4	D	133	2690	6.00x20B	32x6
Dodge Bros. DA1	1	1095	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	140	2955	30x5	30x5
Dodge Bros. DA1	1½	1365	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	150	3695	32x6	32x6
Dodge Bros. DA1	1½	1415	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	165	3810	32x6	32x6
Dodge Bros. DB1	2	1595	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	150	3930	32x6	34x7
Dodge Bros. DB1	2	1645	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	165	4070	32x6	34x7
Dodge Bros. DB1	3	1845	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	46.31	4	D	135	4235	32x6	32x6D
Dodge Bros. DB1	3	1895	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	41.43	4	D	165	4520	32x6	32x6D
Dodge Bros. DB1	3	1945	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	46.31	4	D	185	4715	32x6	32x6D
Durant	¾	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Essex Commercial	¾	445	Own	6	2¾x4½	18.2	CS	Mar	Vac	Aut	Own	U	3	Own	Sp	17.8	4	4	110	2150	30x5	31x5.50
Fargo Packet	½	545	Own	6	3 x4⅛	21.6	Pb	Str	Vac	NE	Own	U	3	Own	Sp	14.29	4	Tr	——	1835	5.00x19	5.00x19
Fargo Clipper	¾	725	Own	6	3⅛x4¼	23.4	Pb	Str	Vac	DR	Own	U	3	Own	Sp	15.53	4	Tr	——	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4⅛	21.6	Pb	Str	Vac	NE	Own	U	4	Own	Sp	37.19	4	Tr	——	2785	6.00x20	32x6
Federal E6	1½	1090	Con 17 E	6	3⅜x4	27.3	Pb	Zen	Vac	DR	W-G T9	U	4	Cla B370	Sp	34.6	4	Tr	132	3260	6.00x20	32x6
Federal D	1-1½	830	Con W 10	4	3⅞x4¼	24.0	Pb	Zen	P	DR	W-G T9	U	4	Cla B372	Sp	40.8	4	Tr	131	3185	6.00x20	32x6
Federal F7	1½	1525	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	DR	Own	U	4	Tim 52005H	Sp	24.3	4	Tr	132	3765	30x5	30x5D
Federal A6	2	1855	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Cla B610	Sp	38.5	4	Tr	151	4580	32x6	32x6D
Federal A6T	2½	2185	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 58000H	Sp	41.3	4	Tr	151	4950	32x6	32x6D
Federal A 6 T W	2½	2360	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 65001 H	Wo	42.0	4	Tr	151	4950	32x6	32x6D
Federal T10R	2½-3	2740	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	P	DR	Own	C	4	Tim 58000H	Sp	36.3	4	Tr	165	6550	34x7	34x7D
Federal T10W	2½-3	2915	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	P	DR	Own	C	4	Tim 65001H	Wo	44.0	4	Tr	165	6550	34x7	34x7D
Federal U6	3-3½	3860	Con 18 R	6	4 x4½	38.4	Pb	Str	P	DR	Br-L 55	C	7	Tim 65706HP	Wo	64.6	4	D	165	7220	34x7	34x7D
Federal 4C6A	4-5	4735	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim 66704HP	Wo	73.6	4	D	192	8330	36x8	36x8D
Federal 4C6AB	4-5	4960	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim 66704TWP	Wo	73.6	4	D	192	8850	36x8	36x8D
*Federal U 6 S W	6	6000	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 200	Wo	71.3	6	Tr	201	9850	34x7	34x7D
*Federal U 6 S W A B	6	6500	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 200	Wo	71.3	4	Tr	201	9900	34x7	34x7L
Federal X8	7½	5085	Con B 7	4	5 x6	40	Pw	Zen	Vac	AB	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	9750	36x6S	40x14S
Federal X8R	7½	5810	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	DR	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	10000	40x8	40x8D
*Federal 4 C 6 S W	8	7500	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 300	Wo	80.8	4	Tr	231	11500	36x8	36x8D
Ford AA	1½	520	Own	4	3⅞x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	131½	2792	6.00x20	32x6
Ford AA	1½	545	Own	4	3⅞x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	157	2570	6.00x30	6.00x30D
F. W. D.—H	1½	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	R	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3½x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—HH 6	2½	4000	Wak	6	3¾x4½	33.7	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	101.0	4	R	133	5700	36x8	36x8
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6S	36x6S
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6S	36x6S
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7S	40x5SD
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6S	36x6S

1930 COMMERCIAL CARS BUILT IN THE UNITED STATES

Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
F. W. D.—C U 6	3½	5120	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6S	36x8S
*F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	*	4	170	9500	36x8	36x8
Garford Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	30x5	30x5
Garford Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	30x5	D30x5
Garford Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	34x5	D34x5
Garford Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	32x6	D32x6
Garford Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	36x6	D36x6
Garford Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	5100	36x6	D36x6
Garford Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7000	36x6	D36x6
Garford Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7100	36x6	D36x7
Garford Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8200	S36x6	S36x12
Garford Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8400	S36x6	S36x14
Garford Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	95.0	4	D	175	9600	S36x6	S40x14
Gen. Mot. T11-1001	*3800	625	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Pontiac	Sp	14.7	4	4	109⅝	1980	5.00x19B	5.50x19B
Gen. Mot. T15-1501	*5400	695	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51500	Sp	16.14	4	4	130	2625	5.50x20B	5.50x20B
Gen. Mot. T17-1701	*5500	735	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2650	6.50x20B	6.50x20B
Gen. Mot. T19-2201	*6300	895	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2850	5.50x20B	32x6
Gen. Mot. T17-1707	*6500	750	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2670	5.50x20B	32x6
Gen. Mot. T25-2501	*6800	1235	Buick	6	3⅞x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3375	6.00x20B	7.50x20B
Gen. Mot. T19-2214	*8500	985	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2925	30x5	30x5D
Gen. Mot. T25-2509	*8500	1280	Buick	6	3⅞x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3425	30x5	30x5D
Gen. Mot. T30-3206	*9000	1555	Buick	6	3⅞x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4450	6.00x20B	8.25x20B
Gen. Mot. T42-4206	*10600	1735	Buick	6	3⅞x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4575	7.00x20B	9.00x20B
Gen. Mot. T30-3203	*11000	1605	Buick	6	3⅞x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4525	32x6	32x6D
Gen. Mot. T44-4401	*12000	1965	Buick	6	3⅞x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	4825	32x6	32x6D
Gen. Mot. T42-4203	*14000	1960	Buick	6	3⅞x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4905	36x6	36x6D
Gen. Mot. T44-4404	*15000	2095	Buick	6	3⅞x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	5095	34x7	34x7D
Gen. Mot. T60-6202	*16500	3035	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154¼	6925	34x7	34x7D
Gen. Mot. T60-6205	*18500	3125	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154¼	6925	9.00x20B	9.00x20DB
Gen. Mot. T82-8202	*19000	3795	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	82.2	4	D	155	7500	9.00x20B	9.00x20DB
Gen. Mot. T82-8207	*22000	4070	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	82.2	4	D	155	7850	38x7	38x9D
Gen. Mot. T90-9001	*23000	5885	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	76.04	WR	D	185¼	9400	7.50x20B	7.50x20D
Gen. Mot. T90-9004	*28000	6055	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	76.04	WR	D	185¼	9775	8.25x20B	8.25x20DB
*Gramm B	1½	1495	Lyc 4 SL	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	34.3	4	Tr	140	3800	30x5	30x5D
*Gramm C	2	1795	Lyc ASA	6	3⅝x4½	31.54	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	31	4	Tr	160	4820	32x6	32x6D
*Gramm D	2½	2195	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	33	4	Tr	160	5100	32x6	32x6D
*Gramm E	3	2595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	35	4	Tr	160	5300	34x7	34x7D
*Gramm EY	3	3595	Con 20 R	6	4⅛x4¾	40.80	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	30	4	D	190	6750	32x6	32x6D
*Gramm O-35	3	3595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	71.2	D	R	153	7200	36x5S	36x10S
*Gramm T-38	3	3595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	45	D	R	153	7200	36x5S	36x10S
*Gramm O-45	4	3995	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	75.8	D	R	153	7700	36x5S	36x12S
*Gramm T-48	4	3995	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	47	D	R	153	7700	36x5S	36x12S
*Gramm GY	4	4345	Con 21 R	6	4⅛x4¾	45.9	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	28	4	D	210	7200	34x7	34x7D
*Gramm O-60	5	4745	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	78.4	D	R	153	8800	36x6S	36x14S
*Gramm HY	5	6545	Con 16 H	6	4¾x5¾	54.15	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	25.2	4	D	236	9600	36x8	36x8D
Indiana 64	1	1195	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	3	Col	Sp	21.3	4	Tr	137	3435	30x5	30x5
Indiana 74	1¼	1290	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	137	3450	32x6	32x6
Indiana 1t	1¼	1425	Her	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	24.48	R	R	129½	3500	30x5	30x5
Indiana 89	1½	1525	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	149	3650	32x6	32x6
Indiana 111	1½	1630	Her	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	26.4	R	R	129½	3600	30x5	32x6
Indiana 111 XW	2	1850	Her	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L	U	4	Wis	2R	30.14	R	Tr	120	3740	32x6	32x6D
Indiana 120	2	1990	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Indiana 140	2	2495	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4V	Tr	156	5500	32x6	32x6D
Indiana 115 A	2½	2740	Her	4	4¼x5	28.9	Pb	Str	Vac	Eis	Br-L	U	4	Cla	Sp	42.99	R	Tr	132	4970	32x6	34x7D
Indiana 615 A	2½	3070	Wis	6	3⅜x5	27.34	Pb	Str	Vac	Eis	Br-L	U	4	Cla	Sp	46.29	R	Tr	136	5160	32x6	32x6D
Indiana 170	2½	3160	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Indiana 127 AW	3	3775	Her	4	4¼x5	28.90	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	41.72	RV	D	158¼	7000	34x7	34x7D
Indiana 627 AW	3	4075	Wis	6	4 x5	38.40	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	41.72	RV	D	156¼	7200	34x7	34x7D
Indiana 195	3	3820	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Indiana 190	3	4185	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Indiana 220	3½	4560	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Indiana 250	5	5950	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Tim	Wo	—	4HMV	D	182	10000	40x8	40x8D
Indiana 290	7	7250	Con	6	4¾x5¾	54.15	Pb	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7	40x14S
Indiana 640	10	9700	Con	6	4¾x5¾	54.15	Pb	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4RW	D	212	14000	38x7	36x19S
International AW-1	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 517	Sp	17.4	4	2	136	2620	5.25x20	5.25x20
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 502 R	Sp	15.1	4	2	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 1124	Sp	52.6	4	2	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	140	3520	30x5	32x6
International AL-3	1½	1450	Lyc SLH	6	3¼x4½	25.3	Pb	Zen	Vac	DR	W-G	U	4	Eat 1518	Sp	42.9	4	2	138	4300	6.00x20	6.00x20D
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	4	Eat 2002	Sp	40.6	4	2	140	4000	32x6	32x6D
Int. Harvester A-4	2	1985	Own-FBB	6	3⅝x4½	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 1712	Sp	47.8	4	2	145	5070	32x6	32x6D
Int. Harvester HS-54	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 54	2R	60.5	4	4	148	8000	36x5S	36x8S
Int. Harvester HS-54-C	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Own A M 428	Ch	63.8	4	4	148	8665	36x5S	36x10S
Int. Harvester W-1	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 58	2R	60.5	4	2	148	8300	36x5S	36x8S
Int. Harvester A-5	3	2550	Own-FBB	6	3⅝x4½	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 2112	Sp	52.0	4	2	156	5606	34x7	34x7D
Int. Harvester HS-74	3½	4850	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 74	2R	70.5	4	4	160	10700	36x5S	40x12S
Int. Harvester HS-74-C	3½	4850	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	79.1	4	4	160	11000	36x6S	40x12S
Int. Harvester W-3	3½	4850	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 78	2R	70.5	4	2	160	10125	36x6S	40x12S
Int. Harv's'r HS-104-C	5	5500	Hall-S 152	4	4¾x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	90.5	4	4	160	11095	36x6S	40x14S
La France-Repub. A-1	*6000	990	Lyc	6	2⅞x4¾	19.8	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	36.1	4	Tr	132	3000	5.50x20	32x6
La France-Repub. C-1	*7000	1295	Lyc	6	3¼x4½	25.4	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.1	4	Tr	144	3300	6.00x20	32x6
La France-Repub. D-1	*9000	1595	Lyc	6	3¼x4½	25.4	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	37.9	4	Tr	144	3725	30x5	30x5D
La France-Repub. F-2	*13000	2395	Lyc	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	40.1	4	D	174	5870	32x6	32x6D
La France-Repub. H-1	*15000	2985	Lyc	6	3⅞x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36.0	4	D	163	5850	34x7	34x7D
La France-Repub. L-1	*18000	3595	Lyc	6	3⅞x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	2R	48.0	4	D	180	6900	36x8	36x8D
La France-Repub. M-1	*20000	3800	Wak	6	4 x4¾	38.4	Pb	Zen	Vac	Aut	Ful	U	5	Eat	2R	62.3	R	D	171	6900	36x8	36x8D
Mack BL	1	2500	Own	6	3¼x5	25.39	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	148	——	B6.00x20	DB6.00x20
††Mack BG	1½	3000	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	138-156	——	32x6	D32x6
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	36x4S	36x8S
††Mack AB	2½-3	3500	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	36x4S	36x8S
Mack AB	2½-3	4750	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	34x7	D34x7
††Mack AB	2½-3	4300	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	34x7	D34x7
††Mack BC	3½-4	4250	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	36x5S	36x5DS
††Mack BC	3½-4	5250	Own	6	4 x5½	38.4	Pb	Str	Vac	NE	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	34x7	D36x8
††Mack BJ	3½-5	6150	Own	6	4½x5½	48.6	Pb	Str	Vac	NE	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x8	36x8D
††Mack AK	3½-5	5150	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4	J	3-Opt	——	36x5S	36x5DS
††Mack AK	3½-5	5250	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x5S	36x5DS
††Mack AC	3½-5	4950	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x5S	40x10S
††Mack AC	5½-7	5500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x6S	40x12S
††Mack AC	7½	6000	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x7S	40x14S
††Mack AP	7½	9500	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	R	J	191	——	36x7S	40x8DS
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	——	36x7S	40x12S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	——	36x7	40x12S
Paige	¾	860	Own	6	3¼x4½	25.35	Pb	DL	P	DR	W-G	U	3	Sal	Sp	17.36	4	Tr	115	2465	B5.50x19	B5.50x19
Relay Series 15	¾	1370	Con 17 E	6	3⅝x4	27.3	Pb	Str	Vac	Aut	W-G	U	4	Own	R	38.4	4	D	131	3750	30x5P	30x5P
Relay Series 15	1	1400	Con 17 E	6	3⅝x4	27.3	Pb	Str	Vac	Aut	W-G	U	4	Own	R	38.4	4	D	139	3800	30x5P	30x5P
Relay Series S 11	1	1700	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	25.7	4	D	142	4050	30x5	30x5
Relay Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	25.7	4	D	162	4500	30x5	D30x5

Major Specifications and Mechanical Details of 1930 Commercial Cars Built in the United States

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Relay Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5300	34x5	D34x5
Relay Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	30.0	4	D	162	4700	32x6	D32x6
Relay Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5500	36x6	D36x6
Relay Series 50	2	3860	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	6800	36x6	D36x6
Relay Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5700	36x6	D36x6
Relay Series 50	2½	4000	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	7000	36x6	D38x7
Relay Series 60	2½	4555	Bud B A 6	6	4 x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	63.7	4	D	175	7350	36x6	D36x6
Relay Series 50	3	4130	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	7200	36x6	D40x8
Relay Series 60	3	4595	Bud B A 6	6	4 x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	63.7	4	D	175	7500	36x6	D38x7
Relay Series 80	3	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	U	8	Own	R	84.18	4	D	175	8400	36x6	S40x10
Relay Series 60	3½	4745	Bud B A 6	6	4 x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	58.5	4	D	175	7800	38x7	D40x8
Relay Series 80	3½	5330	Bud B A	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Cov	C	8	Own	R	84.18	4	D	175	8600	36x6	S40x12
Relay Series 80	4	5380	Bud B A	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Cov	C	8	Own	R	84.18	4	D	175	8800	38x7	S40x14
Relay Series 100	5	6615	Con 21 R	6	4⅜x4¾	45.9	Pb	Str	Vac	Aut	Ful	U	5	Own	R	63.7	4	D	230	10000	9.00x24	D9.75x24
Reo D F 129	½	1095	Own	6	3⅜x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	129	——	6.00x20	32x6
Reo 15 Junior	½	785	Con 16 E	6	3⅜x4	27.3	Pb	Sch	P	DR	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	6.00x18	6.00x18
Reo D F	1	1095	Own C B	6	3⅜x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	135	3200	6.00x20	32x6
Reo F A	1½	1295	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	135	3525	6.50x20	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	6.50x20	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	156	3750	6.50x20	32x6
Reo F H	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6D
Reo F C	2	1645	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6D
Reo F D	2	1745	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6D
Reo G A	3	3035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6D
Reo G D	3	1985	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	46.2	4	Tr	144	4570	32x6	32x6D
Reo G C S	3	2375	Own	6	3¾x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	210	5320	32x6	32x6D
Rugby T	½	655	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Own	U	3	Own	Sp	15.6	4	4	——	2160	29x5	29x5
Rugby 6-15	1	865	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	2900	20x5.50	32x6
Rugby 615	1½	930	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	3000	5.50x20	30x5D
Selden 7 C	1	1098	Con	6	2⅜x4¾	19.84	Pb	Zen	Vac	Aut	Br-L	U	3	Tim	Sp	—	4	D	124	3600	30x5	30x5
Selden 17 C	1½	1500	Con	6	3⅜x4	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 317 C	1½	1610	Con	6	3⅜x4⅝	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 37 C	2	1935	Con	6	3⅜x4⅝	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	151	4800	32x6	32x6D
Selden 39 C	2½	2920	Con	6	4 x4⅛	35.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	164	5800	32x6	32x6D
Selden 47 C B	3½	3785	Con	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	171	7200	34x7	34x7D
Selden 47 C D	4	4435	Con	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	5	Wis	2R	—	4	D	171	7600	36x8	36x8D
Selden 67 C	5	4975	Con	6	4⅜x4¾	45.94	Pb	Str	Vac	Aut	Br-L	C	7	Wis	2R	—	4	D	171	8700	36x8	36x8D
Selden 77	7	7365	Con	6	4¾x5¾	54.15	Pb	Str	Vac	Aut	Br-L	C	7	Wis	2R	—	4	D	178	12000	36x7	40x7D
Service Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	30x5	30x5
Service Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	30x5	D30x5
Service Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	34x5	D34x5
Service Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	32x6	D32x6
Service Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	36x6	D36x6
Service Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	5100	36x6	D36x6
Service Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7000	36x6	36x6
Service Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7100	36x6	D38x7
Service Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8200	S36x6	S36x12
Service Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8400	S36x6	S36x14
Service Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	95.0	4	D	175	9600	S36x6	S40x14
Stewart 30	1	695	Lyc AFE	4	3¾x4½	22.5	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	2905	6.50x20	6.50x20
Stewart 30 X	1	795	Lyc WRG	6	2⅞x4¾	19.8	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	2965	6.50x20	6.50x20
Stewart 40	1½	895	Lyc AFE	4	3¾x4½	22.5	P	Str	Vac	DR	W-G	U	4	Cla	Sp	35.1	4	D	130	3215	6.50x20	6.50x20D
Stewart 34 X	1½	1195	Lyc 4 SL	6	3¼x4½	25.3	Pb	Str	Vac	DR	W-G	U	4	Cla	Sp	35.1	4	D	145	3526	6.50x20	6.50x20
Stewart 28 X	1¾	1495	Lyc 4 SL	6	3¼x4½	25.3	Pb	Str	Vac	DR	Ful	U	4	Cla	Sp	44.1	4	D	136	3840	6.50x20	6.50x20
Stewart 29 XS	2	1695	Lyc ASA	6	3⅝x4½	25.3	Pb	Str	P	DR	Ful	U	4	Cla	Sp	44.1	4	D	145	4188	32x6	32x6D
Stewart 26 XW	2	2290	Lyc TF	6	3⅝x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	48.1	4	D	165	5095	32x6	32x6D
*Stewart 18 X	2½	2690	Lyc TF	6	3⅝x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	48.1	4	D	165	5788	32x6	32x6D
Stewart 32 X	2½	1990	Lyc ASA	6	3⅝x4½	31.54	Pw	Str	Vac	DR	Ful	U	4	Cla	Sp	46.1	4	D	165	5100	32x6	32x6D
Stewart 33 X	3	3290	Lyc TS	6	3⅞x5	36.2	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	105.1	4	D	165	6450	34x7	34x7D
Stewart 19 X	3½	3690	Lyc TS	6	3⅞x5	36.2	Pw	Str	Vac	DR	Ful	C	12	Tim	Wo	105.1	4	D	165	6990	36x5	36x10
Stewart 31 X	5	4990	Wak 6 RSL	6	4⅜x5⅛	45.9	Pw	Str	Vac	DR	Ful	C	8	Tim	Wo	82.1	4	D	165	8400	36x6S	36x6SD
Stewart 27 X	6-7	5700	Wak 6 RSL	6	4⅜x5⅛	45.99	Pw	Str	Vac	DR	Ful	U	8	Tim	Wo	93.81	4	D	165	9927	36x7	40x7D
Studebaker GN-P	¾	845	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.15	4	‡4	115	2465	6.00x19	6.00x19
Studebaker GN-S	1	1045	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	130	2990	6.00x20	30x5
Studebaker GK-N	1	1095	Own	6	3⅜x4⅝	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	146	3000	30x5	30x5
Studebaker GN-N	*4000	1245	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Cla	U	4	Cla	Sp	33.5	4	D	146	3265	30x5	32x6
Studebaker 77	*12500	2895	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	158	5030	7.00x20	7.00x20D
Studebaker 88	*12500	3295	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5200	7.50x20	7.50x20D
Studebaker 99	*14000	3795	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5680	7.50x20	7.50x20D
Whippet 96 A	½	360	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.74	4	R	103¼	1691	4.75x19	4.75x19
White 15 B	1	1545	Own GKA	4	3¾x5⅛	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3242	30x5	30x5
White 60	1	1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	DR	Own	U	3	Own	Sp	17.9	4	D	138	3562	30x5	30x5
White 57	1¼	2725	Own GRC	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3755	32x6	32x6
White 20 A	1½	2125	Own GKA	4	3¾x5⅛	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	2R	32.1	R	R	145½	4412	34x5	34x5D
White 61	1½	2450	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	D	148	4612	30x5	30x5D
White 56	2	3125	Own GRC	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5096	36x4S	36x7S
White 51 A	2½	3750	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.5	R	D	170	6256	36x5S	36x8S
White 58	3	4400	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	49.7	4	R	180	7535	36x5S	36x5SD
White 55	3½	4650	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	66.1	D	R	174	8512	36x5S	40x5SD
White 52 T	3½	4700	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	76.5	D	R	129½	8236	36x5S	40x5SD
White 52	5	5100	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	IG	92.3	D	R	174	9184	36x6S	40x12S
White 59A	7½	6000	Own 3 A	6	4 x5¼	38.4	Pw	Zen	P	L-N	Own	U	4	Own	Sp	66.5	D	R	155 1/16	——	40x8	40x14S
Willys Six 98 B	½	525	Own 98 B	6	3¼x3⅞	25.35	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.28	4	B	110	1903	5.00x19	5.00x19
Willys Six C-101	1½	695	Own 98 B	6	3¼x3⅞	25.35	Pb	Til	Vac	Aut	Cov	U	4	Cla	Sp	36.12	4	B	131	2675	5.50x20	30x5
Willys-Knight T-103	1½	825	Own KGT	6	2⅛x4⅜	20.7	Pb	Til	Vac	Aut	Cov	U	4	Cla	Sp	42.33	4	B	131	2808	5.50x20	30x5

GENERAL NOTATIONS

*†REFERENCE MARKS apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight in pounds.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con., Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak, Waukesha; Wis, Wisconsin. Hall, American Car & Foundry.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all main, connecting rod and camshaft bearings, including wrist-pins; CS, circulating splash; Sp, Splash.

CARBURETOR—Car, Carter; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; DL, Detroit Lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Vac, Vacuum tank; P, Fuel pump.

IGNITION — AB, American-Bosch; Aut, Electric Auto-Lite; Eis, Eisemann; L-N, Loece-Neville; N-E, North East; RB, Robert Bosch; D R, Delco-Remy; Mag, Magneto.

TRANSMISSION—Br. L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear; Cotta, Cotta Gear Co.

LOCATION—C, Center, amid; U, in unit with engine; J, on jackshaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken, Wis, Wisconsin.

FINAL DRIVE—IG, Internal gear; St, Straight bevel; Sp, Spiral bevel; Wo, Worm; 2R, Double reduction; Ch, Chain; R, Relay drive.

BRAKES—J, Jack shaft; R, Rear wheels; D, Drive shaft; 4, four-wheel; Tr, Transmission; V, Vacuum booster; W, Westinghouse air brake. B, Both front and rear wheels.

TIRES—B, Balloon; D, Dual; S, Solid; P, Pneumatic.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 34x7 tire, dual rear, weight 6,400. Price $3,900.

Chieftain model also available as Dump Truck, 160-inch wheel base.

Balloon tires optional on Chief, Chieftain and Big Chief models.

AUSTIN

*Price includes body.

AUTOCAR

*Engines in these models are located under the driver's seat.

DAY-ELDER

Models GF and HF also available in 186-inch wheel base.

Model JF also available in the following wheel bases: 165, 180 and 204 inches.

Model KF also available in 202-inch wheel base and tractor 149.

DURANT LINE

*Price includes panel body.

F. W. D.

*Indicates six-wheel model. Special power take-off transmission, which provides 3 power take offs which may be operated in any transmission speed, optional on all models.

*Foot brake on X6 is a lockheed type operating on all six wheels.

FEDERAL

*Six wheelers.

GRAMM

*Models B, C, D and E are furnished in three wheel base lengths—others on request.

*Models GY and GYB also available in 190-inch wheel base.

*Models HY and HYB also available in 210-inch wheel base.

Tire sizes and electrical equipment optional, depending upon type of service—coach or van.

*Model O Series, Large engine, pneumatic tires, special wheel bases optional at extra cost.

*Model T Series, Large engine, pneumatic tires, special wheel bases and 8 speed transmission optional at extra cost.

GENERAL MOTORS TRUCK LINE

*Capacity indicated for each chassis is the recommended gross weight without exceeding rated capacity of tires. The tire size does not affect the straight rating for which chassis is guaranteed and each model is designed to operate satisfactorily under average conditions with loads giving a total gross weight (chassis, body, equipment and payload) equal to straight rating given below. The additional standard wheel base lengths, the number of additional tire types (tire combinations—each type carrying a recommended gross weight) and the ton range on a nominal payload basis for each model is given below.

Model	Straight Rating	Additional Wh. Bases, ins.	Addit'l Tire Types	Pay'l'd Range None	Pay'l'd Range ½
T-11	3800	None	None		
T-15	5400	141	2	¾	
T-17	6500	141	6	¾-1¼	
T-19	8500	141, 152	16	1-2	
T-25	8500	141, 152	11	1-1¾	
T-30	11000	152, 164	12	1½-2½	
T-42	14000	152, 164, 181	10	2-3½	
T-44	15000	152, 164, 181	10	2-4	
T-60	18500	166¾, 184½, 200¼	16	2½-4⅛	
T-82	22000	167½, 185¼, 201	10	3-6	
T-90	28000	201, 220	5	5-7½	

Optional rear axle ratios are available for all models.

MACK LINE

Other wheel bases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

HYP.—Hypoid drive, single reduction.

††Made also in tractor models.

REO LINE

Model F A also available in 129-inch wheel base.

RUGBY

F—Chassis weight includes body.

STEWART LINE

Model 30 and 30X can also be supplied in 120 and 140-inch wheel base.

Model 40 can also be supplied in 140 and 160-inch wheel base.

*Model 34X can be supplied in 145, 160 and 176-inch wheel base.

Model 28X can be supplied in 145, 160 and 176-inch wheel base.

Model 29XS can be supplied in 160 and 176-inch wheel base.

*Model 26XW can be supplied in 148, 170 and 190-inch wheel base.

*Models 18X, 32X and 33X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27X can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

As optional equipment models 18X, 19X, 33X, 31X and 27X can be supplied with Timken dual reduction rear axle.

STUDEBAKER LINE

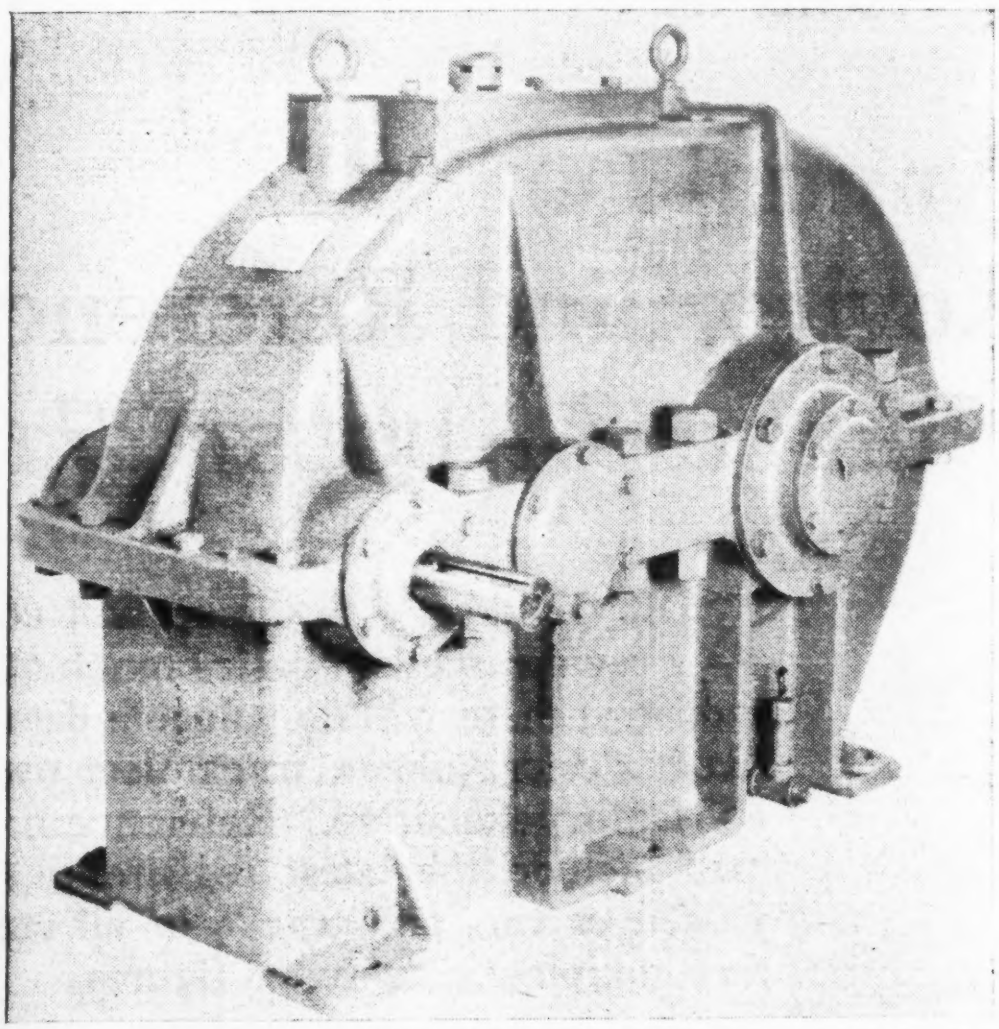
*Capacity Model GN-N is 4,000 lbs. for body, cab, driver and payload.

Maximum gross load, chassis, body and payload for Models 77 and 88 is 12,500 lbs. and for Model 99 is 14,000 lbs.

‡Hand brake same as foot brake; standard. Hand brake on drive shaft; special equipment.

Production - - Engineering - - Factory -

Westinghouse-Nuttal Speed Reducers



TYPES SH and DH speed reducers are new Westinghouse-Nuttall standard single and double-reduction units for use in general industrial and mining operations.

They are of the non-planetary design, with shafts arranged in a horizontal plane, and have either right or left-hand assembly as desired.

Both types are made in twelve sizes, providing a total of twenty-eight standard reduction ratios ranging from 2.82:1 to 70.5:1, and having capacities of 1 to 635 horse power.

In Type SH units, efficiency at full load is from 98 to 99 per cent., and in Type DH units 96 to 98 per cent.

These speed reducers are conservatively rated on the basis of torque to be transmitted in continuous service, with ample allowance for 100 per cent. overloads occurring at starting and momentarily during operation.

The Westinghouse-Nuttall single-helical gear has been adopted as standard for these units following their outstanding success in many hundreds of installations.

Gears are hobbed from forged blanks of .40-.50 carbon steel for all except a few of the largest units, the gears for which are hobbed from thoroughly annealed cast steel.

High speed pinions and shafts are forged from .40-.50 steel heat-treated by the Westinghouse BP "tough-hard" process, which produces much greater load carrying capacity and resistance to wear and shock than the untreated material would provide. After being heat-treated, pinion teeth are recut to assure extreme accuracy.

A long and short addendum tooth form with full depth teeth is used to give maximum strength and tooth overlap, the latter being especially desirable because at least two teeth are always in contact and carrying the load. This tooth form gives added assurance of low frictional losses, quiet operation and long life in helical gearing.

Other advantages obtained with helical gearing are freedom from necessity for close axial alignment of pinion and gear and retention of original tooth form permitting a new pinion to be mated with a worn gear or vice versa.

The shafts of all units are machined from heat-treated .40-.50 carbon forged steel.

In Types SH and DH units the advantages peculiar to Timken and Hyatt bearings have been embodied. A single Timken bearing is used at each end of all high speed and intermediate shafts. On low speed shafts a Hyatt bearing is used at the extension end and a double Timken bearing at the closed end.

Cast from a fine grade of close-grained gray iron, the two-section cases are generously proportioned and ribbed at the points of greatest stress, providing ample strength and rigidity to insure proper alignment of units and parts. Adjoining faces of the two sections are accurately machined and securely held together with through-bolts, forming an oil-tight, dustproof joint without the use of gaskets. At the bearing seats these bolts are of extra size.

Thorough lubrication of the gearing and bearings is supplied by a simple but positive splash system. The bottom section of the case serves as the reservoir for lubricating oil. This oil reservoir has two compartments. Oil returns to the smaller compartment where any sedimentary paritcles are precipitated and then passes into the main chamber into which the low-speed gear dips. This arrangement prevents excessive churning and extraordinary heat. A bayonet type oil gauge is provided on the outside of the lower section of the case for checking the oil level. A removable plug in this gauge permits complete drainage of the oil from the case.

Bedplates of welded steel construction, with or without supports for outboard bearings, are available for all sizes of Types SH and DH units.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

EXPANSION PLUG DECISION REVERSED

LITIGATION begun in 1925 has ended in the United States Circuit Court of Appeals at Cincinnati, with the decision by the Court reversing the ruling of Federal Judge Arthur J. Tuttle of Detroit in the case of The American Plug Company, of Ann Arbor, and Hubbard Spring Company, of Pontiac, against the Hudson Motor Car Company.

Hudson was using expansion plugs to seal holes in castings sold to them by The Brewer-Titchener Corporation, of Cortland, N. Y. These plugs were stamped concave discs that when driven into the hole flattened out and sealed it, thus doing away with threads and bolts. The plaintiff charged infringement by this method, but the case met with stubborn opposition and was carried to the United States Circuit Court of Appeals at Cincinnati, where Judge Tuttle's decision was reversed and The Brewer-Titchener plug pronounced not an infringement. In Judge Tuttle's decision he had ruled the patent held by the M. D. Hubbard Spring Company valid and Hudson Motor Car Company, user of the plug, infringing.

GROSSMANN OF REPUBLIC STEEL IS GIVEN HONOR

Youngstown, O., July 24.—Marcus A. Grossmann, chief assistant to F. J. Griffiths, president of the Republic Research Company, research subsidiary of the Republic Steel Corporation, has been presented with a degree of doctor of science by Harvard University. The degree follows work in studying the quality and behavior of special steels.

In collaboration with E. C. Bain, Grossmann has written a book on high speed steels, which is now on the press. He has been chosen to give the annual lecture before the American Society for Steel Treating in Chicago in September. Dr. Grossmann sailed for Europe today in company with Mr. Griffiths to spend the next few weeks in Europe studying the alloy steel situation.

Meet the Engineers

TO acquaint its readers with the important, but unsung, members of the automotive fraternity—the engineers who design and build the nation's cars—Automotive Daily News is publishing a series of brief biographies of the engineers of companies producing automobiles, automotive equipment, parts and accessories. These biographies will cover the training and experience of leading engineers and their outstanding contributions to the progress of our industry.

THE automotive engineering experience of Horace Thomas, vice-president, in charge of engineering for Reo, dates back twenty-eight years or to the beginning of the industry in this country.

Early in 1903, Alexander Winton attained the terrific speed of sixty-eight miles per hour on the sands of Daytona. In the same year, along came Horace Thomas driving the R. E. Olds "Pirate," making a new record of eighty-six miles per hour on the same track. The "Pirate" was a queer machine, consisting of four light pneumatic racing sulky wheels supporting a frame of spider lightness. On this was mounted a four-cylinder engine and two rocket-like gas tanks, a radiator and other necessary parts. Young Thomas perched at the rear, his feet in stirrups hung from the rear axle and his hands holding the steering wheel so low that he had to crouch uncomfortably. In this position and with no wind protection he made the measured mile on Daytona Beach in forty-two seconds.

Early engineering experiments as conducted by all automobile concerns were usually done in any available corner of the factory. Mr. Thomas is an orderly person, what we might say meticulous, when it comes to determining an engineering truth. So, in 1911, he sounded out the Reo management on the project of a separate engineering building. The board was for it, so in a short time Reo was possessed of the first completely housed engineering workshop and laboratory in the industry. Its equipment of measuring machines, its chemical, metallurgical and physical testing equipment compared with that of the finest college laboratory. Two large building additions and much modern equipment have since been added.

The earliest Reo transmission, which was of the planetary type, contained a single plate, dry disc clutch. While exponents argued for the cone clutch and other different designs, Mr. Thomas stood pat for the single plate dry. True, there were obstacles to overcome, mostly in securing a correct facing material. Leather burned, but so did the leather cone facing, for that matter. Finally, wire mesh asbestos answered the engineers' prayer and today practically all passenger cars made in this country use the single plate dry clutch engagement.

Such characteristics of tenacity as Thomas evinced may come from being born in Vermont, for it was at Newbury in that state where his forbear alternately labored with the grudging, stony hillside soil and manufactured lumber in their own sawmills. Not a great many people have the good fortune to know Mr. Thomas' personality, for he is of the scientific type and therefore not demonstrative. But what a story he can tell of the motor industry, old and new. And when you learn it from him it is generally right, for, as said before, he is meticulous; a stickler for accuracy down to the smallest detail.

New Welding Electrodes

FLEX-ARC welding electrode, a general purpose steel-welding electrode, is announced by Westinghouse Electric and Manufacturing Company. These electrodes are used now for welding the 2,000 tons of steel fabricated monthly in Westinghouse shops. Every conceivable experimental and shop test has been used to detect and overcome undesirable characteristics.

To insure uniformity, each coil of wire is arc tested prior to straightening and cutting. The reduced metal spattering effected by the use of these electrodes assures a quiet, stable and flexible arc at both extreme low and high current values, and the easy arc manipulation gives the operator a more flexible tool for vertical and overhead welding. These electrodes have a uniform melting rate to give quick penetration.

Welds made by these electrodes are easily machined and are free from slag, oxidation and gas inclusions. Tensile strengths ranging from 55,000 to 60,000 pounds per square inch have been obtained.

Flex-Arc sulcoat and bright finish electrodes are manufactured from steel made by the basic open-hearth process. They meet the American Welding Society specifications E-1-B.

OAKES, OF LINK-BELT, DIES IN INDIANAPOIS

Indianapolis, Ind., July 24.—Frank J. Oakes, 54, general superintendent of the Indianapolis plant of the Link-Belt Company since 1915, was buried here Tuesday, death having occurred suddenly at his home Saturday.

Mr. Oakes had been with the Link-Belt Company since he was 17 years old, beginning in Chicago and working his way to the top, until, in 1913, he was transferred to the Philadelphia plant as general superintendent, from which position he came to Indianapolis.

Mr. Oakes became a recognized authority on mechanical engineering, and during the war was selected by the government as a designer and adviser on the manufacture of munitions. He studied chain manufacturing processes and investigated mechanical inventions for the Link-Belt in Europe, and was a pioneer in developing processes for the heat treatment of steel contributing valuable information to heat treaters as a result of his experiments.

BULLARD CO. DEVELOPING DUNN DESCALING PROCESS

Bridgeport, Conn., July 24.—Development of the Bullard Dunn electro-chemical process for the removal of scale, oxides and other foreign matter from the surface of metals, familiarly known as the Dunn descaling process, is proceeding very slowly.

The Bullard Company, which is the owner, has had negotiations for some time with several concerns for license agreements or installations, but has not consummated the business.

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Annual Review and Reference Number--AUGUST 27TH

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¶News of the day, of course.

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